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GENERAL SERVICES ADMINISTRATION
FEDERAL ACQUISITION SERVICE
AUTHORIZED FEDERAL SUPPLY SCHEDULE CATALOG/PRICE LIST

On-line access to contract ordering information, terms and conditions, up-to-date pricing, and the option to create an electronic delivery order is available through **GSA** *Advantage!*, a menu-driven database system.

The INTERNET address for **GSA** *Advantage!* is http://www.gsaadvantage.gov

Federal Supply Schedule 70
General Purpose Commercial Information Technology Equipment, Software and Services

CONTRACT NUMBER: 47QTCA20D002R

CONTRACT PERIOD: November 26, 2019 to November 25, 2024

For more information on ordering from Federal Supply Schedules click on the FSS Schedules button at http://www.fss.gsa.gov

CONTRACTOR
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CONTRACTOR'S ADMINISTRATION SOURCE
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President
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Phone: (443) 794 3622
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BUSINESS SIZE: Small Disadvantaged Business

CUSTOMER INFORMATION:

1a. TABLE OF AWARDED SPECIAL ITEM NUMBERS (SINs)

SIN	DESCRIPTION
132-40	Cloud Computing Services
132-51	Information Technology Professional Services

1b. LOWEST PRICED MODEL NUMBER AND PRICE FOR EACH SIN:

Not Applicable, Services Only

1c. HOURLY RATES:

Awarded SIN	Service Award	GSA Rate 11-26-2019 To 11-25-2020	GSA Rate 11-26-2020 To 11-25-2021	GSA Rate 11-26-2021 To 11-25-2022	GSA Rate 11-26-2022 To 11-25-2023	GSA Rate 11-26-2023 To 11-25-2024
132 40	Cloud Program Manager	$222.43	$227.55	$232.78	$238.14	$243.61
132 40	Cloud Project Manager	$201.96	$206.61	$211.36	$216.22	$221.20
132 40	Cloud Project Engineer	$121.18	$123.97	$126.82	$129.73	$132.72
132 40	Cloud Senior Project Support Staff	$80.79	$82.64	$84.54	$86.49	$88.48
132 40	Cloud Project Support Staff	$60.59	$61.98	$63.41	$64.87	$66.36
132 40	Cloud System Architect	$186.82	$191.12	$195.51	$200.01	$204.61
132 40	Cloud Solution Architect	$186.82	$191.12	$195.51	$200.01	$204.61
132 40	Cloud Software Development Manager	$138.40	$141.58	$144.84	$148.17	$151.58
132 40	Cloud Senior Software Developer/Cloud Senior Computer Programmer	$121.18	$123.97	$126.82	$129.73	$132.72
132 40	Cloud Software Developer/Cloud Computer Programmer	$100.98	$103.30	$105.68	$108.11	$110.60
132 40	Cloud Junior Software Developer/Cloud Junior Computer Programmer	$80.79	$82.64	$84.54	$86.49	$88.48

Awarded SIN	Service Award	GSA Rate 11-26-2019 To 11-25-2020	GSA Rate 11-26-2020 To 11-25-2021	GSA Rate 11-26-2021 To 11-25-2022	GSA Rate 11-26-2022 To 11-25-2023	GSA Rate 11-26-2023 To 11-25-2024
132 40	Cloud Quality Assurance Manager	$131.28	$134.30	$137.39	$140.55	$143.78
132 40	Cloud Senior Software Tester	$111.08	$113.64	$116.25	$118.92	$121.66
132 40	Cloud Software Tester	$90.88	$92.97	$95.11	$97.30	$99.54
132 40	Cloud Junior Software Tester	$70.69	$72.31	$73.98	$75.68	$77.42
132 40	Cloud Senior Database Administrator	$108.74	$111.24	$113.80	$116.42	$119.10
132 40	Cloud Database Administrator	$90.88	$92.97	$95.11	$97.30	$99.54
132 40	Cloud Junior Database Administrator	$70.69	$72.31	$73.98	$75.68	$77.42
132 40	Cloud Senior Database Engineer	$121.18	$123.97	$126.82	$129.73	$132.72
132 40	Cloud Database Engineer	$100.98	$103.30	$105.68	$108.11	$110.60
132 40	Cloud Junior Database Engineer	$80.79	$82.64	$84.54	$86.49	$88.48
132 40	Cloud Technical Support Manager	$100.98	$103.30	$105.68	$108.11	$110.60
132 40	Cloud Technical Support Coordinator	$80.79	$82.64	$84.54	$86.49	$88.48
132 40	Cloud Network Support Manager	$121.18	$123.97	$126.82	$129.73	$132.72
132 40	Cloud Network Support Coordinator	$80.79	$82.64	$84.54	$86.49	$88.48

Awarded SIN	Service Award	GSA Rate
132 51	Program Manager	$222.43
132 51	Project Manager	$197.71
132 51	Senior Engineer	$161.57
132 51	Project Engineer	$121.18
132 51	Staff Engineer	$100.98

Awarded SIN	Service Award	GSA Rate
132 51	Statistician	$100.98
132 51	System Architect	$186.82
132 51	Solution Architect	$186.82
132 51	Data Scientist (Transportation)	$182.88
132 51	Software Development Manager	$141.38
132 51	Quality Assurance Manager	$131.28
132 51	Senior Software Developer/Senior Computer Programmer	$121.18
132 51	Software Developer/Computer Programmer	$100.98
132 51	Junior Software Developer/Junior Computer Programmer	$80.79
132 51	Senior Software Tester	$111.08
132 51	Software Tester	$90.88
132 51	Junior Software Tester	$70.69
132 51	Senior Database Administrator	$111.08
132 51	Database Administrator	$90.88
132 51	Junior Database Administrator	$70.69
132 51	Senior Database Engineer	$121.18
132 51	Database Engineer	$100.98
132 51	Junior Database Engineer	$80.79
132 51	Technical Support Manager	$100.98
132 51	Technical Support Coordinator	$80.79
132 51	Network Support Manager	$121.18
132 51	Network Support Coordinator	$80.79
132 51	UX/UI Designer	$100.98
132 51	Senior Graphics Artist	$80.79
132 51	Graphics Artist	$70.69
132 51	Technical Writer/Editor	$70.69

2. MAXIMUM ORDER*: $500,000.00

NOTE TO ORDERING ACTIVITIES: *If the best value selection places your order over the Maximum Order identified in this catalog/pricelist, you have an opportunity to obtain a better schedule contract price. Before placing your order, contact the aforementioned contactor for a better price. The contractor may (1) offer a new price for this requirement (2) offer the lowest price available under this contract or (3) decline the order. A delivery order that exceeds the maximum order may be placed under the schedule contract in accordance with FAR 8.404.

3. MINIMUM ORDER: $100.00

4. GEOGRAPHIC COVERAGE: Domestic, 50 States, Washington, DC, Virginia, US territories

5. POINT(S) OF PRODUCTION: N/A

6. **DISCOUNT FROM LIST PRICES:** GSA Net Prices are shown on the attached GSA Pricelist.

7. **QUANTITY DISCOUNT(S):** None

8. **PROMPT PAYMENT TERMS:** Net 30

9.a Government Purchase Cards must be accepted at or below the micro-purchase threshold.

9.b Government Purchase Cards is not accepted above the micro-purchase threshold.

10. **FOREIGN ITEMS**: None

11a. TIME OF DELIVERY: Negotiated with Ordering Agency

11b. EXPEDITED DELIVERY: Negotiated with Ordering Agency

11c. OVERNIGHT AND 2-DAY DELIVERY: Negotiated with Ordering Agency

11d. URGENT REQUIREMENTS: N/A

12. **FOB POINT:** Destination

13a. ORDERING ADDRESS: same as contractor

13b. ORDERING PROCEDURES: Ordering activities shall use the ordering procedures described in Federal Acquisition Regulation 8.405-3 when placing an order or establishing a BPA for supplies or services. The ordering procedures, information on Blanket Purchase Agreements (BPA's) and a sample BPA can be found at the GSA/FSS Schedule Homepage (fss.gsa.gov/schedules).

14. **PAYMENT ADDRESS**: Same as contractor

15. **WARRANTY PROVISION:** N/A

16. **EXPORT PACKING CHARGES**: N/A

17. **TERMS AND CONDITIONS OF GOVERNMENT PURCHASE CARD ACCEPTANCE**: N/A

18. **TERMS AND CONDITIONS OF RENTAL, MAINTENANCE, AND REPAIR (IF APPLICABLE):** N/A

19. **TERMS AND CONDITIONS OF INSTALLATION (IF APPLICABLE):** N/A

20. **TERMS AND CONDITIONS OF REPAIR PARTS INDICATING DATEOFPARTSPRICELISTS AND ANY DISCOUNTS FROM LIST PRICES (IF AVAILABLE):** N/A

20a. TERMS AND CONDITIONS FOR ANY OTHER SERVICES (IF APPLICABLE): N/A

21. **LIST OF SERVICE AND DISTRIBUTION POINTS (IF APPLICABLE):** N/A

22. LIST OF PARTICIPATING DEALERS (IF APPLICABLE): N/A

23. PREVENTIVE MAINTENANCE (IF APPLICABLE): N/A

24a. SPECIAL ATTRIBUTES SUCH AS ENVIRONMENTAL ATTRIBUTES (e.g. recycled content, energy efficiency, and/or reduced pollutants): As Applicable

24b. Section 508 Compliance for EIT: As Applicable

25. DUNS NUMBER: 112216853

26. NOTIFICATION REGARDING REGISTRATION IN SYSTEM FOR AWARD MANAGEMENT (SAM) DATABASE: Contractor has an Active Registration in the SAM database.

TERMS AND CONDITIONS APPLICABLE TO PURCHASE OF CLOUD COMPUTING PRODUCTS AND CLOUD RELATED IT PROFESSIONAL SERICES (SPECIAL ITEM NUMBER 132-40)

******NOTE: This SIN presents a solution for Contractors to provide cloud computing services and cloud-related IT professional services that comply with NIST definitions and principles within the scope of today's technology and standards with a secondary goal of accommodating ongoing technical advances in cloud computing. SIN 132-40 Cloud Computing Services and Cloud-Related IT Professional Services is designed to cover core Cloud Services including Infrastructure as a Service, Platform as a Service, and Software as a Service, as well as the Cloud-related IT Professional Services required to assess, prepare, refactor, migrate, DevOps, integrate or govern a Cloud implementation.**

In accordance with section 889 of the National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232, August 13, 2018), an executive agency will be prohibited one year after enactment of the Act from procuring, obtaining, extending or renewing a contract to procure or obtain any equipment, system or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system; and two years after enactment of the Act from entering into, renewing or extending a contract with an entity that uses covered telecommunications equipment or service in that entity's equipment, system or service, as a substantial or essential component of any system, or as critical technology as part of any system. Section 889 defines "covered telecommunications equipment or services" as any of the following:

(A) Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

(B) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

(C) Telecommunications or video surveillance services provided by such entities or using such equipment.

(D) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country (i.e. the People's Republic of China). (Pub. L. 115-232, section 889(f)(3), italicized parenthetical added).

SCOPE

The prices, terms and conditions stated under Special Item Number (SIN) 132-40 Cloud Computing Services (i.e. IaaS, etc.) and Cloud-Related Professional Services apply exclusively to Cloud Computing Services (i.e. IaaS, etc.) and Cloud-Related Professional Services within the scope of this Information Technology Schedule.

This SIN provides ordering activities with access to Cloud (i.e. SaaS, etc.) technical services that run-in cloud environments and meet the NIST Definition of Cloud Computing Essential Characteristics. Cloud Services [(i.e. SaaS, etc.)] relating to or impinging on cloud that do not meet all NIST essential characteristics should be listed in other SINs. (For example: Software subscription services or Software as

a Service offerings that do not meet the essential "measured service" requirement may meet the definition of "Term Licenses" under SIN 132-32. See the Measured Service requirement in Table 2, below.)

The scope of this SIN is limited to cloud capabilities provided entirely as a "pay as you go" service and cloud-related IT professional services. Hardware, software and other artifacts acquired to supporting the physical construction of a private or other cloud are out of scope for this SIN. Currently, an Ordering Activity can procure the hardware and software needed to build private on-premise cloud functionality, through combining different services on other IT Schedule 70 SINs (e.g. 132-8, 132-32, 132-33, 132-34, 132-52,132-51).

Sub-categories in scope for this SIN are the three NIST Service Models: Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS). Offerors may optionally select a single sub-category that best fits a proposed cloud service offering. Only one sub-category may be selected per each proposed cloud service offering. Offerors may elect to submit multiple cloud service offerings, each with its own single sub-category. The selection of one of three sub-categories does not prevent Offerors from competing for orders under the other two sub-categories.
See service model guidance for advice on sub-category selection.
Sub-category selection within this SIN is optional for any individual cloud service offering, and new cloud computing service (i.e. IaaS, etc.) technologies that do not align with the aforementioned three sub-categories may be included without a sub-category selection so long as they comply with the essential characteristics of cloud computing as outlined by NIST.

See Table 1 for a representation of the scope and sub-categories.

Table 1: Cloud Computing Services (i.e. IaaS, etc.)

SIN Description	Sub-Categories[1]
● Commercially available cloud computing services ● Meets the National Institute for Standards and Technology (NIST) definition of Cloud Computing essential characteristics ● Open to all deployment models (private, public, community or hybrid), vendors specify deployment models	**1. Software as a Service (SaaS):** Consumer uses provider's applications on cloud infrastructure. Does not manage/control platform or infrastructure. Limited application level configuration may be available. **2. Platform as a Service (PaaS):** Consumer deploys applications onto cloud platform service using provider-supplied tools. Has control over deployed applications and some limited platform configuration but does not manage the platform or infrastructure. **3. Infrastructure as a Service (IaaS):** Consumer provisions computing resources. Has control over OS, storage, platform, deployed applications and some limited infrastructure configuration, but does not manage the infrastructure.

[1] Offerors may optionally select the single sub-category that best fits each cloud service offering, per Service Model Guidance, or select no sub-category if the offering does not fit an existing NIST service model.

1. DESCRIPTION OF CLOUD COMPUTING SERVICES (i.e. IaaS, etc.) AND PRICING

****NOTE TO CONTRACTORS: The information provided below is designed to assist Contractors in qualifying cloud computing services for this SIN and providing complete descriptions and pricing information. This language should NOT be printed as part of the Information Technology Schedule Pricelist; instead, Contractors should respond to each service requirement as it relates to each cloud computing service offered under the contract. There is guidance provided in subsequent sections of the Terms and Conditions to assist in determining how to meet these requirements. This section delineates requirements for submitting a proposal for the Cloud Services (i.e. IaaS, etc.) SIN, as well as requirements that apply to Task Orders****

a. Service Description Requirements for Listing Contractors

The description requirements below are in addition to the overall Schedule 70 evaluation criteria described in SCP-FSS-001-N Instructions Applicable to New Offerors (Alternate I – MAR 2016) or SCP-FSS-001-S Instructions Applicable to Successful FSS Program Contractors, as applicable, SCP-FSS-004 and other relevant publications.

Refer to overall Schedule 70 requirements for timelines related to description and other schedule updates, including but not limited to clauses 552.238-81 – section E and clause I-FSS-600.

Table 2 summarizes the additional Contractor-provided description requirements for services proposed under the Cloud Computing Services (i.e IaaS, etc.). All mandatory description requirements must be complete, and adequate according to evaluation criteria.

In addition, there is one "Optional" reporting descriptions which exists to provide convenient service selection by relevant criteria. Where provided, optional description requirements must be complete and adequate according to evaluation criteria:

(1) The NIST Service Model provides sub-categories for the Cloud SIN and is strongly encouraged, but not required. The Service Model based sub-categories provide this SIN with a structure to assist ordering activities in locating and comparing services of interest. Contractors may optionally select the single service model most closely corresponding to the specific service offering.

(2) If a sub-category is selected it will be evaluated with respect to the NIST Service Model definitions and guidelines in "Guidance for Contractors".

Table 2: Cloud Service Description Requirements

#	Description Requirement	Reporting Type	Instructions
1	Provide a brief written description of how the proposed cloud computing services (i.e. IaaS, etc.) satisfies each individual essential NIST Characteristic	Mandatory	The cloud service must be capable of satisfying each of the five NIST essential Characteristics as outlined in NIST Special Publication 800-145. See 'GUIDANCE FOR CONTRACTORS: NIST Essential Characteristics' below in this document for detailed overall direction, as well as guidance on inheriting essential characteristics. The NIST "Measured Service" characteristic requires a minimal "pay as you go" unit of measurement appropriate for the service. In the case of SaaS, the appropriate maximum measured increment of service shall be no more than 30 days per user, or some other equivalent discrete measurement that provides the government with the advantage of frequent (approximately every 30 days) "pay as you go" metering cycles. SaaS products, where consumption is only measured on an annual basis, may better fit under "Term Software License" SIN 132-32. Likewise, offers of any combinations of IaaS, PaaS or any other cloud product or services in a bundle or other fashion that do not meet the frequency requirements of approximately 30-day measurement and billing cycles, will not be accepted as complying with the NIST Measured Service characteristic.
2	Select NIST deployment models for the cloud computing service proposed.	Mandatory	Contractors must select at least one NIST deployment model as outlined in NIST Special Publication 800- 145 describing how the proposed cloud computing service is deployed. Select multiple deployment models if the service is offered in more than one deployment model. See 'GUIDANCE FOR CONTRACTORS: NIST Deployment Model' below in this document for detailed direction on how to best categorize a service for the NIST deployment models.
3	Optionally select the most appropriate NIST service model that will be the designated sub- category or may select no sub-category.	Optional	Contractor may select a single NIST Service model to sub- categorize the service as outlined in NIST Special Publication 800-145. Sub-category selection is optional but recommended. See 'GUIDANCE FOR CONTRACTORS: NIST Service Model' below in this document for detailed direction on how to best categorize a service for the NIST IaaS, PaaS, and SaaS service models.

b. Pricing of Cloud Computing Services

All current pricing requirements for Schedule 70, including provision SCP-FSS-001-N (Section III Price Proposal), SCP-FSS-001-S, SCP-FSS-004 (Section III Price Proposal), and clause I-FSS-600 Contract Price Lists, apply. At the current time there is no provision for reducing or eliminating standard price list posting requirements to accommodate rapid cloud price fluctuations.

In addition to standard pricing requirements, all pricing models must have the core capability to meet the NIST Essential Cloud Characteristics, particularly with respect to on-demand self-service, while allowing alternate variations at the task order level at agency discretion, pursuant to the guidance on NIST Essential Characteristics.

2. RESPONSIBILITIES OF THE CONTRACTOR

The Contractor shall comply with all laws, ordinances, and regulations (Federal, State, City, or otherwise) covering work of this character.

a. Acceptance Testing

Any required Acceptance Test Plans and Procedures shall be negotiated by the Ordering Activity at task order level. The Contractor shall perform acceptance testing of the systems for Ordering Activity approval in accordance with the approved test procedures.

b. Training

If training is provided commercially the Contractor shall provide normal commercial installation, operation, maintenance, and engineering interface training on the system. Contractor is responsible for indicating if there are separate training charges.

c. Information Assurance/Security Requirements

The contractor shall meet information assurance/security requirements in accordance with the Ordering Activity requirements at the Task Order level.

d. Related Professional Services

The Contractor is responsible for working with the Ordering Activity to identify related professional services and any other services available on other SINs that may be associated with deploying a complete cloud service (i.e. IaaS, etc.) solution. Any additional substantial and ongoing IT professional services related to the offering such as assessing, preparing, refactoring, migrating, DevOps, developing new cloud-based applications and managing/governing a cloud implementation may be offered per the guidelines below.

e. Performance of Cloud Computing Services (i.e. IaaS, etc.)

The Contractor shall respond to Ordering Activity requirements at the Task Order level with proposed capabilities to Ordering Activity performance specifications or indicate that only standard specifications are offered. In all cases the Contractor shall clearly indicate standard service levels, performance and scale capabilities.

The Contractor shall provide appropriate cloud computing services (i.e. IaaS, etc.) on the date and to the extent and scope agreed to by the Contractor and the Ordering Activity.

f. Reporting

The Contractor shall respond to Ordering Activity requirements and specify general reporting capabilities available for the Ordering Activity to verify performance, cost and availability.

In accordance with commercial practices, the Contractor may furnish the Ordering Activity/user with a monthly summary Ordering Activity report.

3. RESPONSIBILITIES OF THE ORDERING ACTIVITY

The Ordering Activity is responsible for indicating the cloud computing services requirements unique to the Ordering Activity. Additional requirements should not contradict existing SIN or IT Schedule 70 Terms and Conditions. Ordering Activities should include (as applicable) Terms & Conditions to address Pricing, Security, Data Ownership, Geographic Restrictions, Privacy, SLAs, etc.

Cloud services typically operate under a shared responsibility model, with some responsibilities assigned to the Cloud Service Provider (CSP), some assigned to the Ordering Activity, and others shared between the two. The distribution of responsibilities will vary between providers and across service models. Ordering activities should engage with CSPs to fully understand and evaluate the shared responsibility model proposed. Federal Risk and Authorization Management Program (FedRAMP) documentation will be helpful regarding the security aspects of shared responsibilities, but operational aspects may require additional discussion with the provider.

a. Ordering Activity Information Assurance/Security Requirements Guidance

(1) The Ordering Activity is responsible for ensuring to the maximum extent practicable that each requirement issued is in compliance with the Federal Information Security Management Act (FISMA) as applicable.

(2) The Ordering Activity shall assign a required impact level for confidentiality, integrity and availability(CIA) prior to issuing the initial statement of work.[2] The Contractor must be capable of meeting at least the minimum security requirements assigned against a low-impact information system in each CIA assessment area (per FIPS 200) and must detail the FISMA capabilities of the system in each of CIA assessment area.

(3) Agency level FISMA certification, accreditation, and evaluation activities are the responsibility of the Ordering Activity. The Ordering Activity reserves the right to independently evaluate, audit, and verify the FISMA compliance for any proposed or awarded Cloud Computing Services.

(4) The Ordering Activity has final responsibility for assessing the FedRAMP status of the service, complying with and making a risk-based decision to grant an Authorization to Operate (ATO) for the cloud computing service, and continuous monitoring. A memorandum issued by the Office of Management and Budget (OMB) on Dec 8, 2011 outlines the responsibilities of Executive departments and agencies in the context of FedRAMP compliance. [3]

[2.] Per Federal Information Processing Standards Publication 199 & 200 (FIPS 199, "Standards for Security Categorization of Federal Information and Information Systems") (FIPS 200, "Minimum Security Requirements for Federal Information and Information Systems") MEMORANDUM FOR CHIEF INFORMATION OFFICERS: Security Authorization of Information Systems in Cloud Computing

Environments. December 8, 2011.

(5) Ordering activities are responsible for determining any additional information assurance and security related requirements based on the nature of the application and relevant mandates.

b. Deployment Model

If a particular deployment model (Private, Public, Community, or Hybrid) is desired, Ordering Activities are responsible for identifying the desired model(s). Alternately, Ordering Activities could identify requirements and assess Contractor responses to determine the most appropriate deployment model(s).

c. Delivery Schedule

The Ordering Activity shall specify the delivery schedule as part of the initial requirement. The Delivery Schedule options are found in Information for Ordering Activities Applicable to All Special Item Numbers.

d. Interoperability

Ordering Activities are responsible for identifying interoperability requirements. Ordering Activities should clearly delineate requirements for API implementation and standards conformance.

e. Performance of Cloud Computing Services

The Ordering Activity should clearly indicate any custom minimum service levels, performance and scale requirements as part of the initial requirement.

f. Reporting

The Ordering Activity should clearly indicate any cost, performance or availability reporting as part of the initial requirement.

g. Privacy

The Ordering Activity should specify the privacy characteristics of their service and engage with the Contractor to determine if the cloud service is capable of meeting Ordering Activity requirements. For example, a requirement could be requiring assurance that the service is capable of safeguarding Personally Identifiable Information (PII), in accordance with NIST SP 800-1224 and OMB memos M-06-165 and M-07-166. An Ordering Activity will determine what data elements constitute PII according to OMB Policy, NIST Guidance and Ordering Activity policy.

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3. NIST SP 800-122, "Guide to Protecting the Confidentiality of Personally Identifiable Information (PII)"
4. OMB memo M-06-16: Protection of Sensitive Agency Information http://www.whitehouse.gov/sites/default/files/omb/memoranda/fy2006/m06- 16.pdf
5. OMB Memo M-07-16: Safeguarding Against and Responding to the Breach of Personally Identifiable Information http://www.whitehouse.gov/sites/default/files/omb/memoranda/fy2007/m07-16.pdf

h. Accessibility

The Ordering Activity should specify the accessibility characteristics of their service and engage with the Contractor to determine the cloud service is capable of meeting Ordering Activity requirements.

For example, a requirement could require assurance that the service is capable of providing accessibility based on Section 508 of the Rehabilitation Act of 1973 (29 U.S.C. 794d).

i. Geographic Requirements

Ordering activities are responsible for specifying any geographic requirements and engaging with the Contractor to determine that the cloud services offered have the capabilities to meet geographic requirements for all anticipated task orders. Common geographic concerns could include whether service data, processes and related artifacts can be confined on request to the United States and its territories, or the continental United States (CONUS).

j. Data Ownership and Retrieval and Intellectual Property

Intellectual property rights are not typically transferred in a cloud model. In general, CSPs retain ownership of the Intellectual Property (IP) underlying their services and the customer retains ownership of its intellectual property. The CSP gives the customer a license to use the cloud services (i.e. IaaS, etc.) for the duration of the contract without transferring rights. The government retains ownership of the IP and data they bring to the customized use of the service as spelled out in the FAR and related materials.

General considerations of data ownership and retrieval are covered under the terms of Schedule 70 and the FAR and other laws, ordinances, and regulations (Federal, State, City, or otherwise). Because of considerations arising from cloud shared responsibility models, ordering activities should engage with the Contractor to develop more cloud- specific understandings of the boundaries between data owned by the government and that owned by the cloud service provider, and the specific terms of data retrieval.

In all cases, the Ordering Activity should enter into an agreement with a clear and enforceable understanding of the boundaries between government and cloud service provider data, and the form, format and mode of delivery for each kind of data belonging to the government.

The Ordering Activity should expect that the Contractor shall transfer data to the government at the government's request at any time, and in all cases when the service or order is terminated for any reason, by means, in formats and within a scope clearly understood at the initiation of the service. Example cases that might require clarification include status and mode of delivery for:

- Configuration information created by the government and affecting the government’s use of the cloud provider’s service.
- Virtual machine configurations created by the government but operating on the cloud provider’s service.
- Profile, configuration and other metadata used to configure SaaS application services or PaaS platform services.

The key is to determine in advance the ownership of classes of data and the means by which Government owned data can be returned to the Government.

k. Service Location Distribution

The Ordering Activity should determine requirements for continuity of operations and performance and engage with the Contractor to ensure that cloud services have adequate service location distribution to meet anticipated requirements. Typical concerns include ensuring that:

(1) Physical locations underlying the cloud are numerous enough to provide continuity of operations

and geographically separate enough to avoid an anticipated single point of failure within the scope of anticipated emergency events.

(2) Service endpoints for the cloud are able to meet anticipated performance requirements in terms of geographic proximity to service requestors.

Note that cloud providers may address concerns in the form of minimum distance between service locations, general regions where service locations are available, etc.

5. GUIDANCE FOR CONTRACTORS

This section offers guidance for interpreting the Contractor Description Requirements in Table 2, including the NIST essential cloud characteristics, service models and deployment models. This section is not a list of requirements.

Contractor-specific definitions of cloud computing characteristics and models or significant variances from the NIST essential characteristics or models are discouraged and will not be considered in the scope of this SIN or accepted in response to Factors for Evaluation. The only applicable cloud characteristics, service model/subcategories and deployment models for this SIN will be drawn from the NIST 800-145 special publication. Services qualifying for listing as cloud computing services (i.e. IaaS, etc.) under this SIN must substantially satisfy the essential characteristics of cloud computing as documented in the NIST Definition of Cloud Computing SP 800-145[7].

Contractors must select deployment models corresponding to each way the service can be deployed. Multiple deployment model designations for a single cloud service are permitted but at least one deployment model must be selected.

In addition, contractors submitting Cloud services (i.e. IaaS, etc.) for listing under this SIN are encouraged to select a sub-category for each Cloud service (i.e. IaaS, etc.) proposed under this SIN with respect to a single principal NIST cloud service model that most aptly characterizes the service. Cloud Service model (i.e. IaaS, etc.) categorization is optional.

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http://csrc.nist.gov/publications/nistpubs/800-145/SP800-145.pdf
Both Cloud service model (i.e. IaaS, etc.) and deployment model (i.e. public, etc.) designations must accord with NIST definitions. Guidance is offered in this document on making the most appropriate selection

a. NIST Essential Characteristics

General Guidance

NIST's essential cloud characteristics provide a consistent metric for whether a service is eligible for inclusion in this SIN. It is understood that due to legislative, funding and other constraints that government entities cannot always leverage a cloud service to the extent that all NIST essential characteristics are commercially available. For the purposes of the Cloud SIN, meeting the NIST essential characteristics is determined by whether each essential capability of the commercial service is available for the service, whether or not the Ordering Activity actually requests or implements the capability. The guidance in Table 3 offers examples of how services might or might not be included based on the essential characteristics, and how the Contractor should interpret the characteristics in light of current government contracting processes.

Table 3: Guidance on Meeting NIST Essential Characteristics

Characteristic	Capability	Guidance
On-demand self-service	● Ordering activities can directly provision services without requiring Contractor intervention. ● This characteristic is typically implemented via a service console or programming interface for provisioning	Government procurement guidance varies on how to implement on-demand provisioning at this time. Ordering activities may approach on-demand in a variety of ways, including "not-to-exceed" limits, or imposing monthly or other appropriate payment cycles on what are essentially on demand services. Services under this SIN must be capable of true on- demand self-service, and ordering activities and Contractors must negotiate how they implement on demand capabilities in practice at the task order level: ● Ordering activities must specify their procurement approach and requirements for on-demand service ● Contractors must propose how they intend to meet the approach ● Contractors must certify that on-demand self-service is technically available for their service should procurement guidance become available.
Broad Network Access	● Ordering activities are able to access services over standard agency networks ● Service can be accessed and provisioned using standard devices such as browsers, tablets and mobile phones	● Broad network access must be available without significant qualification and in relation to the deployment model and security domain of the service ● Contractors must specify any ancillary activities, services or equipment required to access cloud services or integrate cloud with other cloud or non- cloud networks and services. For example, a private cloud might require an Ordering Activity to purchase or provide a dedicated router, etc. which is acceptable but should be indicated by the Contractor.
Resource Pooling	● Pooling distinguishes cloud services from simple offsite hosting. ● Ordering activities draw resources from a common pool maintained by the Contractor	● The cloud service must draw from a pool of resources and provide an automated means for the Ordering Activity to dynamically allocate them. ● Manual allocation, e.g. manual operations at a physical server farm where Contractor staff configure servers in response to Ordering

Characteristic	Capability	Guidance
	● Resources may have general characteristics such as regional location	Activity requests, does not meet this requirement ● Similar concerns apply to software and platform models; automated provisioning from a pool is required ● Ordering activities may request dedicated physical hardware, software or platform resources to access a private cloud deployment service. However the provisioned cloud resources must be drawn from a common pool and automatically allocated on request.
Rapid Elasticity	● Rapid provisioning and de-provisioning commensurate with demand	● Rapid elasticity is a specific demand-driven case of self-service ● 'Rapid' should be understood as measured in minutes and hours, not days or weeks. ● Elastic capabilities by manual request, e.g. via a console operation or programming interface call, are required. ● Automated elasticity which is driven dynamically by system load, etc. is optional. Contractors must specify whether automated demand-driven elasticity is available and the general mechanisms that drive the capability.
Measured Service	● Measured service should be understood as a reporting requirement that enables an Ordering Activity to control their use in cooperation with self service	● Procurement guidance for on-demand self-service applies to measured service as well, i.e. rapid elasticity must be technically available but ordering activities and Contractors may mutually designate other contractual arrangements. ● Regardless of specific contractual arrangements, reporting must indicate actual usage, be continuously available to the Ordering Activity, and provide meaningful metrics appropriate to the service measured ● Contractors must specify that measured service is available and the general sort of metrics and mechanisms available ● The goal of the Measured Service requirement is to ensure Ordering Activities realize the full benefit of "pay as you go" consumption models. Consumption measurements that are not discrete enough or frequent enough (greater than 30 days), will not fulfill this NIST essential characteristic and will not be eligible for inclusion in this SIN.

Inheriting Essential Characteristics

Cloud Services (i.e. IaaS, etc.) may depend on other cloud services, and cloud service models such as PaaS and SaaS are able to inherit essential characteristics from other cloud services that support them. For example, a PaaS platform service can inherit the broad network access made available by the IaaS service it runs on, and in such a situation would be fully compliant with the broad network access essential characteristic. Cloud Services (i.e. IaaS, etc.) inheriting essential characteristics must make the inherited characteristic fully available at their level of delivery to claim the relevant characteristic by inheritance.

Inheriting characteristics does not require the inheriting provider to directly bundle or integrate the inherited service, but it does require a reasonable measure of support and identification. For example, the Ordering Activity may acquire an IaaS service from "Provider A" and a PaaS service from "Provider B". The PaaS service may inherit broad network access from "Provider A" but must identify and support the inherited service as an acceptable IaaS provider.

Accessing Board Network Access

Typically, broad network access for public deployment models implies high bandwidth access from the public internet for authorized users. In a private cloud deployment internet access might be considered broad access, as might be access through a dedicated shared high bandwidth network connection from the Ordering Activity, in accord with the private nature of the deployment model.

Resource Pooling and Private Cloud

All cloud resource pools are finite, and only give the appearance of infinite resources when sufficiently large, as is sometimes the case with a public cloud. The resource pool supporting a private cloud is typically smaller with more visible limits. A finite pool of resources purchased as a private cloud service qualifies as resource pooling so long as the resources within the pool can be dynamically allocated to the ultimate users of the resource, even though the pool itself appears finite to the Ordering Activity that procures access to the pool as a source of dynamic service allocation.

b. NIST Service Model

The Contractor may optionally document the service model of cloud computing (e.g. IaaS, PaaS, SaaS, or a combination thereof, that most closely describes their offering, using the definitions in The NIST Definition of Cloud Computing SP 800-145. The following guidance is offered for the proper selection of service models.

NIST's service models provide this SIN with a set of consistent sub-categories to assist ordering activities in locating and comparing Cloud services (i.e. IaaS, etc.) of interest. Service model is primarily concerned with the nature of the service offered and the staff and activities most likely to interact with the service. Contractors should select a single service model most closely corresponding to their proposed service based on the guidance below. It is understood that cloud services can technically incorporate multiple service models and the intent is to provide the single best categorization of the service.

Contractors should take care to select the NIST service model most closely corresponding to each service offered. Contractors should not invent, proliferate or select multiple cloud service model sub-categories to distinguish their offerings, because ad-hoc categorization prevents consumers from comparing similar offerings. Instead vendors should fully make full use of the existing NIST categories possible.

For example, in this SIN an offering commercially marketed by a Contractor as "Storage as a Service" would be properly characterized as Infrastructure as a Service (IaaS), storage being a subset of

infrastructure. Services commercially marketed as “LAMP as a Service” or “Database as a Service” would be properly characterized under this SIN as Platform as a Service (PaaS), as they deliver two kinds of platform services. Services commercially marketed as “Travel Facilitation as a Service” or “Email as a Service” would be properly characterized as species of Software as a Service (SaaS) for this SIN.

However, Contractors can and should include appropriate descriptions (include commercial marketing terms) of the service in the full descriptions of the service’s capabilities.

When choosing between equally plausible service model sub-categories, Contractors should consider several factors:

(1) Visibility to the Ordering Activity. Service model sub-categories in this SIN exist to help Ordering Activities match their requirements with service characteristics. Contractors should select the most intuitive and appropriate service model from the point of view of an Ordering Activity.

(2) Primary Focus of the Cloud Service (i.e. IaaS, etc.). Services may offer a mix of capabilities that span service models in the strict technical sense. For example, a service may offer both IaaS capabilities for processing and storage, along with some PaaS capabilities for application deployment, or SaaS capabilities for specific applications. In a service mix situation, the Contractor should select the service model that is their primary focus. Alternatively, contractors may choose to submit multiple service offerings for the SIN, each optionally and separately subcategorized.

(3) Ordering Activity Role. Contractors should consider the operational role of the Ordering Activity’s primary actual consumer or operator of the service. For example, services most often consumed by system managers are likely to fit best as IaaS; services most often consumed by application deployers or developers as PaaS, and services most often consumed by business users as SaaS.

(4) Lowest Level of Configurability. Contractors can consider IaaS, PaaS and SaaS as an ascending hierarchy of complexity, and select the model with the lowest level of available Ordering Activity interaction. As an example, virtual machines are an IaaS service often bundled with a range of operating systems, which are PaaS services. The Ordering Activity usually has access to configure the lower level IaaS service, and the overall service should be considered IaaS. In cases where the Ordering Activity cannot configure the speed, memory, network configuration, or any other aspect of the IaaS component, consider categorizing as a PaaS service.

Cloud management and cloud broker services should be categorized based on their own characteristics and not those of the other cloud services that are their targets. Management and broker services typically fit the SaaS service model, regardless of whether the services they manage are SaaS, PaaS or IaaS. Use Table 3 to determine which service model is appropriate for the cloud management or cloud broker services, or, alternately choose not to select a service model for the service.

The guidance in Table 4 offers examples of how services might be properly mapped to NIST service models and how a Contractor should interpret the service model sub- categories.

Table 4: Guidance on Mapping to NIST Service Models

Service Model	Guidance
Infrastructure as a Service (IaaS)	Select an IaaS model for service based equivalents of hardware appliances such as virtual machines, storage devices, routers and other physical devices. ● IaaS services are typically consumed by system or device managers who would configure physical hardware in a non-cloud setting ● The principal customer interaction with an IaaS service is provisioning then configuration, equivalent to procuring and then configuring a physical device. Examples of IaaS services include virtual machines, object storage, disk block storage, network routers and firewalls, software defined networks. Gray areas include services that emulate or act as dedicated appliances and are directly used by applications, such as search appliances, security appliances, etc. To the extent that these services or their emulated devices provide direct capability to an application they might be better classified as Platform services (PaaS). To the extent that they resemble raw hardware and are consumed by other platform services they are better classified as IaaS.
Platform as a Service (PaaS)	Select a PaaS model for service-based equivalents of complete or partial software platforms. For the purposes of this classification, consider a platform as a set of software services capable of deploying all or part of an application. ● A complete platform can deploy an entire application. Complete platforms can be proprietary or open source ● Partial platforms can deploy a component of an application which combined with other components make up the entire deployment ● PaaS services are typically consumed by application deployment staff whose responsibility is to take a completed agency application and cause it to run on the designated complete or partial platform service ● The principal customer interaction with a PaaS service is deployment, equivalent to deploying an application or portion of an application on a software platform service. ● A limited range of configuration options for the platform service may be available. Examples of complete PaaS services include: ● A Linux/Apache/MySQL/PHP (LAMP) platform ready to deploy a customer PHP application, ● a Windows .Net platform ready to deploy a .Net application, ● A custom complete platform ready to develop and deploy a customer application in a proprietary language. ● A multiple capability platform ready to deploy an arbitrary customer application on a range of underlying software services. The essential characteristics of a complete PaaS is defined by the customer's ability to deploy a complete custom application directly on the platform. PaaS includes partial services as well as complete platform services. Illustrative examples of individual platform enablers or components include:

Service Model	Guidance
	● A database service ready to deploy a customer's tables, views and procedures, ● A queuing service ready to deploy a customer's message definitions ● A security service ready to deploy a customer's constraints and target applications for continuous monitoring The essential characteristic of an individual PaaS component is the customer's ability to deploy their unique structures and/or data onto the component for a partial platform function. Note that both the partial and complete PaaS examples all have two things in common: ● They are software services, which offer significant core functionality out of the box ● They must be configured with customer data and structures to deliver results As noted in IaaS, operating systems represent a gray area in that OS is definitely a platform service but is typically bundled with IaaS infrastructure. If your service provides an OS but allows for interaction with infrastructure, please sub-categorize it as IaaS. If your service "hides" underlying infrastructure, consider it as PaaS.
Software as a Service (SaaS)	Select a SaaS model for service based equivalents of software applications. ● SaaS services are typically consumed by business or subject-matter staff who would interact directly with the application in a non-cloud setting ● The principal customer interaction with a SaaS service is actual operation and consumption of the application services the SaaS service provides. Some minor configuration may be available, but the scope of the configuration is limited to the scope and then the permissions of the configuring user. For example, an agency manager might be able to configure some aspects of the application for their agency but not all agencies. An agency user might be able to configure some aspects for themselves but not everyone in their agency. Typically, only the Contractor would be permitted to configure aspects of the software for all users. Examples of SaaS services include email systems, business systems of all sorts such as travel systems, inventory systems, etc., wiki's, websites or content management systems, management applications that allow a customer to manage other cloud or non-cloud services, and in general any system where customers interact directly for a business purpose. Gray areas include services that customers use to configure other cloud services, such as cloud management software, cloud brokers, etc. In general, these sorts of systems should be considered SaaS, per guidance in this document.

c. Deployment Model

Deployment models (e.g. private, public, community, or hybrid) are not restricted at the SIN level and any specifications for a deployment model are the responsibility of the Ordering Activity.

Multiple deployment model selection is permitted, but at least one model must be selected. The guidance in Table 4 offers examples of how services might be properly mapped to NIST deployment models and how the Contractor should interpret the deployment model characteristics. Contractors should take care to select the range of NIST deployment models most closely corresponding to each service offered.

Note that the scope of this SIN does not include hardware or software components used to construct a cloud, only cloud capabilities delivered as a service, as noted in the Scope section.

Table 5: Guidance for Selecting a Deployment Model

Deployment Model	Guidance
Private Cloud	The service is provided exclusively for the benefit of a definable organization and its components; access from outside the organization is prohibited. The actual services may be provided by third parties, and may be physically located as required, but access is strictly defined by membership in the owning organization.
Public Cloud	The service is provided for general public use and can be accessed by any entity or organization willing to contract for it.
Community Cloud	The service is provided for the exclusive use of a community with a definable shared boundary such as a mission or interest. As with private cloud, the service may be in any suitable location and administered by a community member or a third party.
Hybrid Cloud	The service is composed of one or more of the other models. Typically hybrid models include some aspect of transition between the models that make them up, for example a private and public cloud might be designed as a hybrid cloud where events like increased load permit certain specified services in the private cloud to run in a public cloud for extra capacity, e.g. bursting.

6. INFORMATION PERTAINING TO CLOUD RELATED IT PROFESSIONAL SERVICES

NOTE: Offerors may offer Cloud Services (i.e. IaaS, etc.) exclusively; it is not a requirement to also offer Cloud Related IT Professional Services. Similarly, offerors of Cloud Related IT Professional Services are not required to also offer Cloud Services (i.e. IaaS, etc.). Offerors who have capabilities in both Cloud Services (i.e. IaaS, etc.) and Cloud Related IT Professional Services may offer both, under this SIN.

NOTE: ****Labor categories under Special Item Number 132-51 “Information Technology Professional Services may remain under SIN 132-51, unless they are specific to the Cloud Computing Products and IT Professional Services 132-40. Labor specific to Cloud Computing should be positioned by Contractors under SIN 132-40 in order for Contractors to have the opportunity to bid on requests for quotes that are generated exclusively under the Cloud SIN. Offerors may offer Cloud IT Professional Services exclusively; it is not a requirement to also offer Cloud Services (i.e Iaas).

a. SCOPE OF 132-40 Cloud Related IT Professional Services

(1) The labor categories, prices, terms and conditions stated under Special Item Numbers 132-40 Cloud Services and Related IT Professional Services apply exclusively to this SIN within the scope of this Information Technology Schedule. It is anticipated that the relevant IT Professional Services for this SIN (132-40) are related to the following: assessing cloud solutions, preparing for cloud solutions, refactoring legacy solutions for cloud migration, migrating legacy or other systems to cloud solutions, DevOps, developing new cloud based applications and providing management/governance for cloud solutions. Contractors may propose other types of relevant professional services as long as they are specifically designed to work within and/or support the types of cloud product services described in SIN 132-40.

(2) Cloud Related IT Professional Services provided under this SIN shall comply with all certifications and industry standards as applicable pertaining to the type of services as specified by ordering agency.

(3) The Contractor shall provide Cloud Related IT Professional Services at the Contractor's facility and/or at the ordering activity location, as agreed to by the Contractor and the ordering activity.

b. ORDER

(1) Agencies may use written orders, Electronic Data Interchange (EDI) orders, Blanket Purchase Agreements, individual purchase orders, or task orders for ordering services under this contract. Blanket Purchase Agreements shall not extend beyond the end of the contract period; all services and delivery shall be made, and the contract terms and conditions shall continue in effect until the completion of the order. Orders for tasks which extend beyond the fiscal year for which funds are available shall include FAR 52.232-19 (Deviation – May 2003) Availability of Funds for the Next Fiscal Year. The order shall specify the availability of funds and the period for which funds are available.

(2) All task orders are subject to the terms and conditions of the contract. In the event of conflict between a task order and the contract, the contract will take precedence.

c. PERFORMANCE OF SERVICES

(1) The Contractor shall commence performance of Cloud Related IT Professional Services on the date agreed to by the Contractor and the ordering activity.

(2) The Contractor agrees to render Cloud Related IT Professional Services during normal working hours, unless otherwise agreed to by the Contractor and the ordering activity.

(3) The ordering activity should include the criteria for satisfactory completion for each task in the Statement of Work or Delivery Order. Cloud Related IT Professional Services shall be completed in a good and workmanlike manner.

(4) Any Contractor travel required in the performance of Cloud Related IT Professional Services must comply with the Federal Travel Regulation or Joint Travel Regulations, as applicable, in effect on the date(s) the travel is performed. Established Federal Government per diem rates will apply to all Contractor travel. Contractors cannot use GSA city pair contracts. All travel will be agreed upon with the client prior to the Contractor's travel.

d. INSPECTION OF SERVICES

Inspection of services is in accordance with 552.212-4 CONTRACT TERMS AND CONDITIONS– COMMERCIAL ITEMS (JAN 2017) (DEVIATION – FEB 2007) (DEVIATION - FEB 2018) for

Firm-Fixed Price orders; or GSAR 552.212-4 CONTRACT TERMS AND CONDITIONS-COMMERCIAL ITEMS (JAN 2017) (DEVIATION - FEB 2018) (ALTERNATE I - JAN 2017) (DEVIATION - FEB 2007) for Time-and-Materials and Labor- Hour Contracts orders placed under this contract.

e. RESPONSIBILITIES OF THE CONTRACTOR

The Contractor shall comply with all laws, ordinances, and regulations (Federal, State, City, or otherwise) covering work of this character. If the end product of a task order is software, then FAR 52.227-14 (MAY 2014) Rights in Data – General, may apply.

The Contractor shall comply with contract clause (52.204-21) to the Federal Acquisition Regulation (FAR) for the basic safeguarding of contractor information systems that process, store, or transmit Federal data received by the contract in performance of the contract. This includes contract documents and all information generated in the performance of the contract.

f. RESPONSIBILITIES OF THE ORDERING ACTIVITY

Subject to the ordering activity's security regulations, the ordering activity shall permit Contractor access to all facilities necessary to perform the requisite Cloud Computing IT Professional Services.

g. INDEPENDENT CONTRACTOR

All Cloud Computing IT Professional Services performed by the Contractor under the terms of this contract shall be as an independent Contractor, and not as an agent or employee of the ordering activity.

h. ORGANIZATIONAL CONFLICTS OF INTEREST

(1) Definitions.

"Contractor" means the person, firm, unincorporated association, joint venture, partnership, or corporation that is a party to this contract.

"Contractor and its affiliates" and "Contractor or its affiliates" refers to the Contractor, its chief executives, directors, officers, subsidiaries, affiliates, subcontractors at any tier, and consultants and any joint venture involving the Contractor, any entity into or with which the Contractor subsequently merges or affiliates, or any other successor or assignee of the Contractor.

An "Organizational conflict of interest" exists when the nature of the work to be performed under a proposed ordering activity contract, without some restriction on ordering activities by the Contractor and its affiliates, may either (i) result in an unfair competitive advantage to the Contractor or its affiliates or (ii) impair the Contractor's or its affiliates' objectivity in performing contract work.

To avoid an organizational or financial conflict of interest and to avoid prejudicing the best interests of the ordering activity, ordering activities may place restrictions on the Contractors, its affiliates, chief executives, directors, subsidiaries and subcontractors at any tier when placing orders against schedule contracts. Such restrictions shall be consistent with FAR 9.505 and shall be designed to avoid, neutralize, or mitigate organizational conflicts of interest that might otherwise exist in situations related to individual orders placed against the schedule contract. Examples of situations, which may require restrictions, are provided at FAR 9.508.

i. INVOICES

The Contractor, upon completion of the work ordered, shall submit invoices for Cloud Computing IT Professional Services. Progress payments may be authorized by the ordering activity on individual orders if appropriate. Progress payments shall be based upon completion of defined milestones or interim products. Invoices shall be submitted monthly for recurring IT professional services performed during the preceding month.

j. PAYMENTS

The ordering activity shall pay the Contractor upon submission of proper invoices or vouchers, the prices stipulated in this contract for service rendered and accepted. Progress payments shall be made only when authorized by the order. Payments shall be made in accordance with:

For orders that are NOT time-and-materials/labor hours (fixed price applicable).

- GSAR 552.212-4 CONTRACT TERMS AND CONDITIONS–COMMERCIAL ITEMS (JAN 2017) (DEVIATION – FEB 2007) (DEVIATION - FEB 2018)

For orders that are time-and-materials/labor hours.

- GSAR 552.212-4 CONTRACT TERMS AND CONDITIONS-COMMERCIAL ITEMS (JAN 2017) (DEVIATION - FEB 2018) (ALTERNATE I - JAN 2017) (DEVIATION - FEB 2007)

(1) FAR 52.216-31 (Feb 2007) Time-and Materials/Labor-Hour Proposal Requirements— Commercial Item Acquisition. As prescribed in 16.601(f)(3), insert the following provision: The Government contemplates award of a Time-and-Materials or Labor-Hour type of contract resulting from this solicitation.

(2) The offeror must specify fixed hourly rates in its offer that include wages, overhead, general and administrative expenses, and profit. The offeror must specify whether the fixed hourly rate for each labor category applies to labor performed by-

i The offeror;

ii Subcontractors; and/or

iii Divisions, subsidiaries, or affiliates of the offeror under a common control.]

k. RESUMES

Resumes shall be provided to the GSA Contracting Officer or the user ordering activity upon request.

l. APPROVAL OF SUBCONTRACTS

The ordering activity may require that the Contractor receive, from the ordering activity's Contracting Officer, written consent before placing any subcontract for furnishing any of the work called for in a task order.

m. DESCRIPTION OF CLOUD COMPUTING LABOR HOURS AND PRICING

(1) The Contractor shall provide a description of each type of Cloud Computing Professional Service offered under Special Item Numbers 132-40 and it should be presented in the same manner as the Contractor sells to its commercial and other ordering activity customers. If the Contractor is proposing hourly rates, a description of all corresponding commercial job titles (labor categories) for those individuals who will perform the service should be provided.

(2) Pricing for all Cloud Computing IT Professional Services shall be in accordance with the Contractor's customary commercial practices; e.g., hourly rates, minimum general experience and minimum education.

SIN: 132-40: Cloud Computing Labor Descriptions

Cloud Program Manager:

Minimum Experience: 20 years
Minimum Education: Bachelors
Responsible to formulate, organize and monitor relatively significant program or a group of inter-connected cloud infrastructure projects. Must be able to decide on the suitable strategies to adopt in order to meet program objectives. Would be responsible for coordinating cross-project activities. They would be leading and evaluating project managers and other staff. The program manager shall be answerable for controlling the program deadlines, budgets and activities. They must plan ahead to manage change and risk management and must also develop high-level risk mitigation strategies.

Cloud Project Manager:

Minimum Experience: 15 years
Minimum Education: Bachelors
Responsible for managing all the aspects of project management since the discovery phase of the project and carrying it through the design, development, quality testing, security testing and deployment on the cloud infrastructure. Has an in-depth understanding of the relevant technologies and the requirements of the project. Identifies the core areas of focus to solve the customer's business pains and helps the team in designing the most suitable infrastructure solution that affectively addresses all the customer needs. Also acts as the main point of contact for the high-level communication with the client and passes the relevant instructions to the development and infrastructure team. Develops detailed project plans, effort estimates, schedules, resource allocation plans and risk and mitigation plans. The Project Manager must get all these plans approved by the client before the commencement of the project. Project Manager will be answerable to the client in case of any changes in the plan. It is their job to ensure all the deliverables are produced before the deadline and no deviation from original project plans takes place. In case such deviations are inevitable, the Project Manager shall develop mitigation strategies and communicate all these changes to the client with justifications for the change, if necessary.

Cloud Project Engineer:

Minimum Experience: 5 years
Minimum Education: Bachelors
These individuals have an engineering background with a firm grasp on both engineering and management skills. Project Engineers are responsible to create a flawless communication within technical and non-technical teams in order to evaluate the prospective projects, agree on timelines, draw up agreements with clients and research and negotiate with third party contractors in order to bring project into fruition. The project engineer's ultimate responsibility is to bring a budgeted and successful project to life while satisfying all parties involved.

They should have deep understanding of cloud technologies and be able to create and administer appropriate testing protocols to monitor project performance and inform all supervisors and subcontractors promptly of any project schedule changes. They must work closely with all stakeholders to ensure requirements are met. They are supposed to maintain budgetary, scheduling, and project database oversight, and report regularly to project manager to keep him/her constantly informed of job progress, plans and problems that could significantly affect costs or schedules.

Cloud System Architect:

Minimum Experience: 10 years
Minimum Education: Bachelors
Responsible for designing and implementing short and long-term strategic goals for managing and maintaining software systems deployed on the cloud. They make sure that all the planned and in-place system architectures are aligned with the specific firm's goals. They provide their expertise and architectural assistance to other IT Personnel including software teams, requirements analysts and engineers. They conduct research on new technologies in the field of cloud infrastructure and create and develop plans for investing in such systems that will increase cost effectiveness and flexibility.
System Architects design, create and monitor the implementation of end-to-end integrated systems. They also review new and existing system designs and make recommendations for improving or altering the systems. The end goal is to provide the most reliable and robust system performance within the approved budget.

Cloud Solution Architect:

Minimum Experience: 8 years
Minimum Education: Bachelors
Solution Architect is responsible for developing a deep understanding of the customer's requirements and design a holistic cloud-based solution that is bound to relieve the customer of their business pains. Solution Architect belongs to a technical background and has an in-depth knowledge of software development and cloud infrastructure technologies. They get the requirements by the Project Manager or the Requirements Analyst, understand them and develop high-level algorithms for the software structure. They recommend the best course of action to fulfill those needs and must be flexible enough to adapt to the client's requirements. The solution architect will prepare end-to-end software workflows, work with the database architect to prepare cloud database designs and develop the course of action for cloud deployments.

Cloud Software Development Manager*:*

Minimum Experience: 10 years
Minimum Education: Bachelors
The software development managers are the highly experienced software developers, responsible for all aspects of programming and software development for multiple cloud-deployment projects running in parallel. They are leading the teams of software engineers and computer scientists who are responsible for programming of the specific parts of the software systems. They have to decide the allocation of resources for the specific projects and programming tasks and distribute the workload to gain maximum output from the available resources. Being computer programmers themselves, the software development managers have to review and verify the quality of the code and ensure all the cloud deployment and backup protocols are being followed.

Cloud Senior Software Developer/Cloud Senior Computer Programmer:

Minimum Experience: 8 years
Minimum Education: Bachelors
These are the experienced programmers who work on mission critical parts of the software application and its cloud infrastructure deployment. They usually have to develop codes for complicated algorithms and test them locally before merging them with the software system. They can work in multiple roles related to software development, software quality testing as well as cloud infrastructure management and integration. They usually have to work on both the front-end and back-end technologies. They often delegate the lesser complicated coding to the junior programmers and work themselves on the complex portions. These resources work under minimal supervision and are responsible for major components of the software system.

Cloud Software Developer/Cloud Computer Programmer:

Minimum Experience: 3 years
Minimum Education: Bachelors
These developers have intermediate experience who can manage to program the considerably complicated parts of the cloud-hosted software application. They are responsible for the rapid prototyping of the software patches and merging them with the holistic solution. They can work in multiple roles related to software development, software quality testing as well as cloud infrastructure management and integration. They usually have to work on both the front-end and back-end technologies. They mostly work independently for the assigned responsibilities but might require occasional assistance from the senior developers or managers. They may develop technical documentation and user manuals for the product under development.

Cloud Junior Software Developer/Cloud Junior Computer Programmer:

Minimum Experience: 1 year
Minimum Education: Bachelors
Under supervision, these programmers can perform coding for new software components and perform other software development and cloud infrastructure integration activities. They can work in multiple roles related to software development, software quality testing as well as cloud infrastructure management and integration. They usually have to work on both the front-end and back-end technologies. They can also perform technical support and routine maintenance tasks on both the application as well as the cloud infrastructure. Their team leads or managers will be supervising and reviewing their activities to ensure quality of work. Additionally, they may assist in the development of user manuals and work on the technical documentation of the project.

Cloud Quality Assurance Manager:

Minimum Experience: 10 years
Minimum Education: Bachelors
QA manager is responsible for managing the quality assurance for the entire scope of work of the given project. They are responsible for creating, reviewing and approving cloud deployment plans for the software project and ensure the availability of resources at the time of requirement. The QA manager would ensure the optimum resource allocation to run QA testing on multiple modules of the project in parallel to minimize the testing time and speed up the overall process. They must ensure that all bugs pointed out by their team have been rectified before the project goes live. In case the development team is unable to fix the bugs, they must escalate the problem to the Project Manager so that they can devise a mitigation strategy. In addition, the QA manager is also responsible for conducting regular internal audits to ensure all the processes are being followed to meet the quality standards and strict documentation is taking place at each step. They may have to work with PMO and development team to find the deficiencies in the processes and suggest improvements.

Cloud Senior Software Tester:

Minimum Experience: 8 years
Minimum Education: Bachelors
These are highly experienced resources who can work independently on specific cloud infrastructure projects and ensure that no compromise on software quality is taking place at the hands of the development team. They will develop testing automation procedures to maximize the speed of software testing. They often must lead a group of junior testers and delegate testing responsibilities, while also reviewing their progress and ensuring that the deadline is not missed.

Cloud Software Tester:

Minimum Experience: 3 years
Minimum Education: Bachelors
These are the experienced resources who can work independently on specific projects and ensure that no compromise on software quality is taking place at the hands of the development and infrastructure team. They test the applications on cloud infrastructure environment to make sure the application performance is unaffected by the local or cloud deployment. They will develop testing automation procedures to maximize the speed of software testing. For some projects, they may have to lead a group of junior testers and delegate testing responsibilities, while also reviewing their progress and ensuring that the deadline is not missed.

Cloud Junior Software Tester:

Minimum Experience: 1 year
Minimum Education: Bachelors
These resources work under the direct supervision of their seniors or the manager in order to perform software testing and automation. They test the applications on cloud infrastructure environment to make sure the application performance is unaffected by the local or cloud deployment. These are responsible for developing use cases and test cases documents and assist their seniors in developing detailed testing plans and schedules. They may also be required to assist in compiling testing and bug fixing reports for the specific projects.

Cloud Senior Database Administrator:

Minimum Experience: 10 year
Minimum Education: Bachelors
A highly experienced professional having complete expertise in cloud database design and management for applications with massive data requirements. Has good command in the use of DBMS and can independently lead a team of database engineers to carry out all the database maintenance and management related tasks. Quite often, they have to work with the system architect/solution architect to get a good understanding of the customer requirements and design the most suitable solution. The senior database administrator is often managing a team of database engineers and delegating database related tasks to them, in case multiple projects are running in parallel. The senior database administrator must also be ultimately responsible for database errors faced in live websites and must proactively resolve critical issues themselves or by delegating to their subordinates.

Cloud Database Administrator:

Minimum Experience: 5 years
Minimum Education: Bachelors
A highly experienced professional having expertise in cloud database design and management for applications with massive data requirements. Has good command in the use of DBMS as well as cloud technologies and is able to work independently to carry out all the database design and management related tasks. Quite often, they have to work with the system architect/solution architect to get a good understanding of the customer requirements and design the most suitable solution. The database administrator might be managing a team of database engineers and delegating database related tasks to them, in case multiple projects are running in parallel. The database administrator must also be ultimately responsible for database errors faced in live websites and must proactively resolve critical issues themselves or by delegating to their subordinates.

Cloud Junior Database Administrator:

Minimum Experience: 1 years
Minimum Education: Bachelors

An experienced professional having expertise in cloud database design and management for applications with massive data requirements. Has good command in the use of DBMS as well as cloud technologies and is able to work independently to carry out all the database design and management related tasks. Quite often, they have to work with the system architect/solution architect to get a good understanding of the customer requirements and design the most suitable solution. The junior database administrator might be managing a team of database engineers and delegating database related tasks to them, for multiple projects running in parallel. The database administrator must also be ultimately responsible for database issues faced in live websites and must proactively resolve critical issues themselves or delegating to their subordinates.

Cloud Senior Database Engineer:

Minimum Experience: 8 years
Minimum Education: Bachelors
Responsible for designing cloud database architecture and ERDs for applications with complex data needs. The senior database engineer mostly works independently but may have to work in supervision of a manager to execute the tasks at hand. Quite often, they must work with the system architect/solution architect to get a good understanding of the customer requirements and design or propose the most suitable solution. They are also responsible for the support, maintenance and troubleshooting of existing applications.

Cloud Database Engineer:

Minimum Experience: 3 years
Minimum Education: Bachelors
Responsible for designing cloud database architecture and ERDs for applications with considerable data needs. The database engineer may work independently or require supervision/assistance of a senior/manager to execute the tasks at hand. They are also responsible for the support, maintenance and troubleshooting of existing applications.

Cloud Junior Database Engineer:

Minimum Experience: 1 years
Minimum Education: Bachelors
Responsible for designing cloud database architecture and ERDs for applications with relatively simple data needs. The junior database engineer may frequently require supervision/assistance of a senior/manager to execute the tasks at hand. They are also responsible to assist in the support, maintenance and troubleshooting of existing applications.

Cloud Technical Support Manager:

Minimum Experience: 8 years
Minimum Education: Bachelors
A highly experienced professional having the expertise and skill set to manage a team of resources to provide on-going technical support for multiple cloud hosted software projects in parallel. They have good grasp on cloud infrastructure as well as the application development technologies. The manager has to assign optimum resources to make sure the reported issues are fixed on priority and in minimum amount of time. They set the KPI's for their team and track the status of bug reporting and fixing. They are also responsible to document and present periodic reports about the performance of the support team by analyzing the data of the reported problems and the time taken to resolve them. They also plan and devise strategies to improve the response time of their team, by changing the resource allocation, or providing necessary training to the underperforming resources. In case of complicated problems arising, they may have to directly communicate with the client and development team unless all the issues have been resolved.

Cloud Technical Support Coordinator:
Minimum Experience: 3 years
Minimum Education: Bachelors
A moderately experienced technical support engineer who can manage the technical support for a complete cloud-hosted project and carry out the important communication with the relevant stakeholders. They have good grasp on cloud infrastructure as well as the application development technologies. They may have to communicate with the client's point of contact and also coordinate with their own development and infrastructure teams until the problem is resolved effectively. In case the problem is more complicated and there is a chance of increase in system downtime, the coordinator will escalate the issue and inform all the relevant stakeholders. They also have to keep track of the progress at all stages and take actions for effective resolution of issues in the minimum time. The coordinator is also responsible for generating and compiling reports regarding the reported issues and their resolution to assess the team performance and take steps to further boost the performance if required.

Cloud Network Support Manager:
Minimum Experience: 8 years
Minimum Education: Bachelors
A highly experienced professional who is capable of managing a team of resources for maintaining and administering cloud networks and related computing environments including systems software, applications software, cloud infrastructure, and configurations. They plan, document, train the resources and supervise the disaster recovery operations and cloud data backup procedures when required, in addition to protecting data, software, and hardware by coordinating, planning and implementing network security measures on cloud infrastructure. They can manage troubleshooting, diagnosing and resolving hardware, software and other network and system problems. In fact, the network manager has to ensure and plan ahead to make sure no connectivity or software performance issues arise in any of the projects. They continuously monitor network performance to determine if any adjustments or modifications need to be made on the cloud infrastructure. In addition, they are the subject matter experts regarding the cyber-security risk assessment and mitigation strategies. They are responsible for reinstating the system in its original running form in the minimum possible time in case of an incident.

Cloud Network Support Coordinator:
Minimum Experience: 3 years
Minimum Education: Bachelors
An experienced professional who is responsible for maintaining and administering cloud networks and related computing environments including systems software, applications software, cloud infrastructure, and configurations. They plan, document, and perform the disaster recovery operations and cloud data backup procedures when required, in addition to protecting data, software, and hardware by coordinating, planning and implementing network security measures. Their responsibilities also include troubleshooting, diagnosing and resolving cloud infrastructure, software and other network and system problems. They continuously monitor network performance to determine if any adjustments or modifications need to be made. They can work independently but may require assistance from the supervisor/manager. In addition, they are involved in performing the cyber-security risk assessment and mitigation strategies especially related to cloud infrastructure. They are responsible for reinstating the system in its original running form in the minimum possible time in case of an incident.

SIN 132-40 Cloud Products

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
132-40	Amazon Web Services	RDS MySQL	na	na	RDS, MySQL, db.m5.xlarge, 100 GB Volume	Per Hour	$0.53
132-40	Amazon Web Services	RDS Oracle SE2	na	na	RDS, Oracle SE 2, db.m5.xlarge, 100 GB Volume	Per Hour	$1.33
132-40	Amazon Web Services	RDS Oracle SE1	na	na	RDS, Oracle SE 1, db.m5.xlarge, 100 GB Volume	Per Hour	$1.24
132-40	Amazon Web Services	RDS SQL Ent.	na	na	RDS, MS SQL Server Enterprise, db.m5.xlarge, 100 GB Volume	Per Hour	$3.86
132-40	Amazon Web Services	RDS SQL Std.	na	na	RDS, MS SQL Server Standard, db.m5.xlarge, 100 GB Volume	Per Hour	$1.85
132-40	Amazon Web Services	RDS SQL Web	na	na	RDS, MS SQL Server Web, db.m5.xlarge, 100 GB Volume	Per Hour	$0.83
132-40	Amazon Web Services	RDS PSQL	na	na	RDS, PostgreSQL, db.m5.xlarge, 100 GB Volume	Per Hour	$0.55
132-40	Amazon Web Services	RDS MDB	na	na	RDS, MariaDB, db.m5.xlarge, 100 GB Volume	Per Hour	$0.53
132-40	Amazon Web Services	ALB	na	na	01 Application Laod Balancer, 100 new xonnections/second per ALB, 60s Connection Duration, 100 Request/second per ALB, 5 EC2 Instances and IP addresses as targetted (GB/month)	Per Hour	$0.08
132-40	Amazon Web Services	S3	na	na	S3 Standard Storage (US East, N. Virginia)	Per GB-Month	$0.02

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
132-40	Amazon Web Services	CloudWatch - 1	na	na	CloudWatch, custom metrics	Per Metric Per Month	$0.44
132-40	Amazon Web Services	CloudWatch - 2	na	na	CloudWatch, Dashboards	Per Dashboard Per Month	$4.40
132-40	Amazon Web Services	CloudWatch - 3	na	na	CloudWatch, Alarm, Standard Resolution (60 sec)	Per Alarm Metric	$0.15
132-40	Amazon Web Services	CloudWatch - 4	na	na	CloudWatch, Alarm, High Resolution (10 sec)	Per Alarm Metric	$0.44
132-40	Amazon Web Services	CloudWatch - 5	na	na	CloudWatch, Logs, Collect (Data Ingestion)	Per GB	$0.73
132-40	Amazon Web Services	CloudWatch - 6	na	na	CloudWatch, Logs, Store (Archival)	Per GB	$0.04
132-40	Amazon Web Services	CloudWatch - 7	na	na	CloudWatch, Logs, Analyze (logs Insights queries)	Per GB of data scanned	$0.01
132-40	Amazon Web Services	CloudWatch - 8	na	na	CloudWatch, Logs, Vended Logs Cost	Per GB	$0.73
132-40	Amazon Web Services	CloudWatch - 9	na	na	CloudWatch, Logs, Deliver Logs Cost	Per GB	$0.37
132-40	Amazon Web Services	CloudWatch - 10	na	na	CloudWatch, Events, Custom or Cross-Account	Per Million Events	$1.47
132-40	Amazon Web Services	SES - 1	na	na	Simple Email Service, Sending/Receiving Emails	Per 10,000 Emails	$0.15
132-40	Amazon Web Services	SES - 2	na	na	Simple Email Service, Sending/Receiving Email Attachments	Per GB	$0.18
132-40	Amazon Web Services	SNS - 1	na	na	Simple Notification Service	Per 100,000 requests	$2.93

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
					(email/email-JSON)		
132-40	Amazon Web Services	SNS - 2	na	na	Simple Notification Service (HTTP/s)	Per Million Requests	$0.88
132-40	Amazon Web Services	SQS - 1	na	na	Simple Queue Service, (Standard Queue)	Per Million Requests	$0.02
132-40	Amazon Web Services	SQS - 2	na	na	Simple Queue Service, (FIFO Queue)	Per Million Requests	$0.49
132-40	Amazon Web Services	EBS - 1	na	na	Cold HDD (sc1) provisioned storage - US East (Northern Virginia)	Per GB-Month	$0.04
132-40	Amazon Web Services	EBS - 2	na	na	I/O requests - US East (Northern Virginia)	Per 1 Million I/O Requests	$0.07
132-40	Amazon Web Services	EBS - 3	na	na	Magnetic provisioned storage - US East (Northern Virginia)	Per GB-Month	$0.07
132-40	Amazon Web Services	EBS - 4	na	na	Snapshot data stored - US East (Northern Virginia)	Per GB-Month	$0.07
132-40	Amazon Web Services	EBS - 5	na	na	General Purpose SSD (gp2) provisioned storage - US East (Northern Virginia)	Per GB-Month	$0.15
132-40	Amazon Web Services	AES - 1	na	na	Amazon Elastic Search - t2.small.elasticsearch instance	Per Hour	$0.05
132-40	Amazon Web Services	AES - 2	na	na	Amazon Elastic Search - Magnetic storage	Per GB-Month	$0.10
132-40	Amazon Web Services	Route 53 - 1	na	na	Route 53 - Hosted Zones and Records - Upto 25 Hosted Zones, up to 10,000 records	Per Hosted Zone Per Month	$0.73

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
132-40	Amazon Web Services	Route 53 - 2	na	na	Route 53 - Standard Queries - First 1 Billion Queries / Month	Per Million Queries	$0.59
132-40	Amazon Web Services	Route 53 - 3	na	na	Route 53 - Standard Queries - Over 1 Billion Queries / Month	Per Million Queries	$0.29
132-40	Amazon Web Services	Route 53 - 4	na	na	Route 53 - Latency based Routing Queries - Upto 1 Billion Queries per month	Per Million Queries	$0.88
132-40	Amazon Web Services	Route 53 - 5	na	na	Route 53 - Latency based Routing Queries - Over 1 Billion Queries per month	Per Million Queries	$0.44
132-40	Amazon Web Services	Route 53 - 6	na	na	Route 53 -Geo DNS and Proximity Queries - Upto 1 Billion Quries per Month	Per Million Queries	$1.03
132-40	Amazon Web Services	Route 53 - 7	na	na	Route 53 -Geo DNS and Proximity Queries - Over 1 Billion Quries per Month	Per Million Queries	$0.51
132-40	Amazon Web Services	CloudFront - 1	na	na	CloudFront - US Requests - HTTP Proxy	Per 10,000 Proxy HTTP Requests	$0.01
132-40	Amazon Web Services	CloudFront - 2	na	na	CloudFront - US Requests - Tier 1	Per 10,000 Proxy HTTP Requests	$0.01
132-40	Amazon Web Services	CloudFront - 3	na	na	CloudFront - US Requests - Tier 2	Per 10,000 Proxy HTTP Requests	$0.01
132-40	Amazon Web Services	CloudFront - 4	na	na	CloudFront - Bandwidth - All data Transfrer out	Per GB	$0.03

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
					to Origin (US) up to 10 TB		
132-40	Amazon Web Services	WAF - 1	na	na	Web Application Firewall - Web ACL Charges	Per Web ACL Per Month	$7.33
132-40	Amazon Web Services	WAF - 2	na	na	Web Application Firewall - Rule Charges	Per Rule Per Web ACL Per Month	$1.47
132-40	Amazon Web Services	WAF - 3	na	na	Web Application Firewall - Request Charges	Per Million Web Requests	$0.88
132-40	Amazon Web Services	Config - 1	na	na	Config Rules - First 100,000 Rule Evaluations	Per Rule Evaluation Per Region	$0.00
132-40	Amazon Web Services	Config - 2	na	na	Config Rules - Next 400,000 Rule Evaluations (100,001 to 500,000)	Per Rule Evaluation Per Region	$0.00
132-40	Amazon Web Services	Config - 3	na	na	Config Rules - 500,001 Rule Evaluations and More	Per Rule Evaluation Per Region	$0.00
132-40	Amazon Web Services	c5d.large	na	na	Compute Optimized, Windows, 2 vCPU,4 GB RAM, 1 x 50 NVMe SSD Storage, Up to 10 Gbps Bandwidth	Per Hour	$0.28
132-40	Amazon Web Services	c5d.xlarge	na	na	Compute Optimized, Windows, 4 vCPU,8 GB RAM, 1 x 100 NVMe SSD Storage, Up to 10 Gbps Bandwidth	Per Hour	$0.55
132-40	Amazon Web Services	c5d.2xlarge	na	na	Compute Optimized,	Per Hour	$1.10

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
					Windows, 8 vCPU,16 GB RAM, 1 x 200 NVMe SSD Storage, Up to 10 Gbps Bandwidth		
132-40	Amazon Web Services	c5d.4xlarge	na	na	Compute Optimized, Windows, 16 vCPU,32 GB RAM, 1 x 400 NVMe SSD Storage, Up to 10 Gbps Bandwidth	Per Hour	$2.20
132-40	Amazon Web Services	c5d.9xlarge	na	na	Compute Optimized, Windows, 36 vCPU,72 GB RAM, 1 x 900 NVMe SSD Storage, 10 Gigabit Bandwidth	Per Hour	$4.96
132-40	Amazon Web Services	c5d.18xlarge	na	na	Compute Optimized, Windows, 72 vCPU,144 GB RAM, 2 x 900 NVMe SSD Storage, 25 Gigabit Bandwidth	Per Hour	$9.92
132-40	Amazon Web Services	d2.xlarge	na	na	Storage optimized, Windows, 4 vCPU,30.5 GB RAM, 3 x 2000 HDD Storage, Moderate Bandwidth	Per Hour	$1.20
132-40	Amazon Web Services	d2.2xlarge	na	na	Storage optimized, Windows, 8 vCPU,61 GB RAM, 6 x 2000	Per Hour	$2.35

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
					HDD Storage, High Bandwidth		
132-40	Amazon Web Services	d2.4xlarge	na	na	Storage optimized, Windows, 16 vCPU,122 GB RAM, 12 x 2000 HDD Storage, High Bandwidth	Per Hour	$4.49
132-40	Amazon Web Services	d2.8xlarge	na	na	Storage optimized, Windows, 36 vCPU,244 GB RAM, 24 x 2000 HDD Storage, 10 Gigabit Bandwidth	Per Hour	$9.09
132-40	Amazon Web Services	g4dn.xlarge	na	na	Accelerated computing, Windows, 4 vCPU,16 GB RAM, 125 GB NVMe SSD Storage, Up to 25 Gbps Bandwidth	Per Hour	$1.04
132-40	Amazon Web Services	g4dn.2xlarge	na	na	Accelerated computing, Windows, 8 vCPU,32 GB RAM, 225 GB NVMe SSD Storage, Up to 25 Gbps Bandwidth	Per Hour	$1.64
132-40	Amazon Web Services	g4dn.4xlarge	na	na	Accelerated computing, Windows, 16 vCPU,64 GB RAM, 225 GB NVMe SSD Storage, Up to 25 Gbps Bandwidth	Per Hour	$2.84
132-40	Amazon Web Services	g4dn.8xlarge	na	na	Accelerated computing,	Per Hour	$5.35

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
					Windows, 32 vCPU,128 GB RAM, 900 GB NVMe SSD Storage, 50 Gigabit Bandwidth		
132-40	Amazon Web Services	g4dn.12xlarge	na	na	Accelerated computing, Windows, 48 vCPU,192 GB RAM, 900 GB NVMe SSD Storage, 50 Gigabit Bandwidth	Per Hour	$8.97
132-40	Amazon Web Services	g4dn.16xlarge	na	na	Accelerated computing, Windows, 64 vCPU,256 GB RAM, 900 GB NVMe SSD Storage, 50 Gigabit Bandwidth	Per Hour	$10.70
132-40	Amazon Web Services	h1.2xlarge	na	na	Storage optimized, Windows, 8 vCPU,32 GB RAM, 1 x 2000 HDD Storage, Up to 10 Gbps Bandwidth	Per Hour	$1.23
132-40	Amazon Web Services	h1.4xlarge	na	na	Storage optimized, Windows, 16 vCPU,64 GB RAM, 2 x 2000 HDD Storage, Up to 10 Gbps Bandwidth	Per Hour	$2.45
132-40	Amazon Web Services	h1.8xlarge	na	na	Storage optimized, Windows, 32 vCPU,128 GB RAM, 4 x 2000 HDD Storage, 10	Per Hour	$4.90

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
					Gigabit Bandwidth		
132-40	Amazon Web Services	h1.16xlarge	na	na	Storage optimized, Windows, 64 vCPU,256 GB RAM, 8 x 2000 HDD Storage, 25 Gigabit Bandwidth	Per Hour	$9.80
132-40	Amazon Web Services	i3.large	na	na	Storage optimized, Windows, 2 vCPU,15.25 GB RAM, 1 x 475 NVMe SSD Storage, Up to 10 Gbps Bandwidth	Per Hour	$0.36
132-40	Amazon Web Services	i3.xlarge	na	na	Storage optimized, Windows, 4 vCPU,30.5 GB RAM, 1 x 950 NVMe SSD Storage, Up to 10 Gbps Bandwidth	Per Hour	$0.73
132-40	Amazon Web Services	i3.2xlarge	na	na	Storage optimized, Windows, 8 vCPU,61 GB RAM, 1 x 1900 NVMe SSD Storage, Up to 10 Gbps Bandwidth	Per Hour	$1.45
132-40	Amazon Web Services	i3.4xlarge	na	na	Storage optimized, Windows, 16 vCPU,122 GB RAM, 2 x 1900 NVMe SSD Storage, Up to 10 Gbps Bandwidth	Per Hour	$2.91

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
132-40	Amazon Web Services	i3.8xlarge	na	na	Storage optimized, Windows, 32 vCPU,244 GB RAM, 4 x 1900 NVMe SSD Storage, 10 Gigabit Bandwidth	Per Hour	$5.82
132-40	Amazon Web Services	i3.16xlarge	na	na	Storage optimized, Windows, 64 vCPU,488 GB RAM, 8 x 1900 NVMe SSD Storage, 20 Gigabit Bandwidth	Per Hour	$11.63
132-40	Amazon Web Services	i3.metal	na	na	Storage optimized, Windows, 72 vCPU,512 GB RAM, 8 x 1900 NVMe SSD Storage, 25 Gigabit Bandwidth	Per Hour	$11.63
132-40	Amazon Web Services	i3en.large	na	na	Storage optimized, Windows, 2 vCPU,16 GB RAM, 1 x 1250 NVMe SSD Storage, Up to 25 Gbps Bandwidth	Per Hour	$0.47
132-40	Amazon Web Services	i3en.xlarge	na	na	Storage optimized, Windows, 4 vCPU,32 GB RAM, 1 x 2500 NVMe SSD Storage, Up to 25 Gbps Bandwidth	Per Hour	$0.93

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
132-40	Amazon Web Services	i3en.2xlarge	na	na	Storage optimized, Windows, 8 vCPU,64 GB RAM, 2 x 2500 NVMe SSD Storage, Up to 25 Gbps Bandwidth	Per Hour	$1.86
132-40	Amazon Web Services	i3en.3xlarge	na	na	Storage optimized, Windows, 12 vCPU,96 GB RAM, 1 x 7500 NVMe SSD Storage, Up to 25 Gbps Bandwidth	Per Hour	$2.80
132-40	Amazon Web Services	i3en.6xlarge	na	na	Storage optimized, Windows, 24 vCPU,192 GB RAM, 2 x 7500 NVMe SSD Storage, 25 Gigabit Bandwidth	Per Hour	$5.59
132-40	Amazon Web Services	i3en.12xlarge	na	na	Storage optimized, Windows, 48 vCPU,384 GB RAM, 4 x 7500 NVMe SSD Storage, 50 Gigabit Bandwidth	Per Hour	$11.19
132-40	Amazon Web Services	i3en.24xlarge	na	na	Storage optimized, Windows, 96 vCPU,768 GB RAM, 8 x 7500 NVMe SSD Storage, 100 Gigabit Bandwidth	Per Hour	$22.38

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
132-40	Amazon Web Services	i3en.metal	na	na	Storage optimized, Windows, 96 vCPU,768 GB RAM, 8 x 7500 NVMe SSD Storage, 100 Gigabit Bandwidth	Per Hour	$22.38
132-40	Amazon Web Services	m5ad.large	na	na	General Purpose, Windows, 2 vCPU,8 GB RAM, 1 x 75 NVMe SSD Storage, Up to 10 Gbps Bandwidth	Per Hour	$0.29
132-40	Amazon Web Services	m5ad.xlarge	na	na	General Purpose, Windows, 4 vCPU,16 GB RAM, 1 x 150 NVMe SSD Storage, Up to 10 Gbps Bandwidth	Per Hour	$0.57
132-40	Amazon Web Services	m5ad.2xlarge	na	na	General Purpose, Windows, 8 vCPU,32 GB RAM, 1 x 300 NVMe SSD Storage, Up to 10 Gbps Bandwidth	Per Hour	$1.14
132-40	Amazon Web Services	m5ad.4xlarge	na	na	General Purpose, Windows, 16 vCPU,64 GB RAM, 2 x 300 NVMe SSD Storage, Up to 10 Gbps Bandwidth	Per Hour	$2.29
132-40	Amazon Web Services	m5ad.12xlarge	na	na	General Purpose, Windows, 48 vCPU,192 GB RAM, 2 x 900 NVMe SSD Storage, 10	Per Hour	$6.86

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
					Gigabit Bandwidth		
132-40	Amazon Web Services	m5ad.24xlarge	na	na	General Purpose, Windows, 96 vCPU,384 GB RAM, 4 x 900 NVMe SSD Storage, 20 Gigabit Bandwidth	Per Hour	$13.72
132-40	Amazon Web Services	m5d.large	na	na	General Purpose, Windows, 2 vCPU,8 GB RAM, 1 x 75 NVMe SSD Storage, Up to 10 Gbps Bandwidth	Per Hour	$0.30
132-40	Amazon Web Services	m5d.xlarge	na	na	General Purpose, Windows, 4 vCPU,16 GB RAM, 1 x 150 NVMe SSD Storage, Up to 10 Gbps Bandwidth	Per Hour	$0.60
132-40	Amazon Web Services	m5d.2xlarge	na	na	General Purpose, Windows, 8 vCPU,32 GB RAM, 1 x 300 NVMe SSD Storage, Up to 10 Gbps Bandwidth	Per Hour	$1.20
132-40	Amazon Web Services	m5d.4xlarge	na	na	General Purpose, Windows, 16 vCPU,64 GB RAM, 2 x 300 NVMe SSD Storage, Up to 10 Gbps Bandwidth	Per Hour	$2.40
132-40	Amazon Web Services	m5d.8xlarge	na	na	General Purpose, Windows, 32 vCPU,128 GB RAM, 2 x 600	Per Hour	$4.81

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
					NVMe SSD Storage, 10 Gigabit Bandwidth		
132-40	Amazon Web Services	m5d.12xlarge	na	na	General Purpose, Windows, 48 vCPU,192 GB RAM, 2 x 900 NVMe SSD Storage, 10 Gigabit Bandwidth	Per Hour	$7.21
132-40	Amazon Web Services	m5d.16xlarge	na	na	General Purpose, Windows, 64 vCPU,256 GB RAM, 4 x 600 NVMe SSD Storage, 20 Gigabit Bandwidth	Per Hour	$9.62
132-40	Amazon Web Services	m5d.24xlarge	na	na	General Purpose, Windows, 96 vCPU,384 GB RAM, 4 x 900 NVMe SSD Storage, 25 Gigabit Bandwidth	Per Hour	$14.42
132-40	Amazon Web Services	m5d.metal	na	na	General Purpose, Windows, 96 vCPU,384 GB RAM, 4 x 900 NVMe SSD Storage, 25 Gigabit Bandwidth	Per Hour	$14.42
132-40	Amazon Web Services	p3dn.24xlarge	na	na	Accelerated computing, Windows, 96 vCPU,768 GB RAM, 2 x 900 NVMe SSD Storage, 100 Gigabit Bandwidth	Per Hour	$52.23

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
132-40	Amazon Web Services	r5ad.large	na	na	Memory optimized, Windows, 2 vCPU,16 GB RAM, 1 x 75 NVMe SSD Storage, 10 Gigabit Bandwidth	Per Hour	$0.33
132-40	Amazon Web Services	r5ad.xlarge	na	na	Memory optimized, Windows, 4 vCPU,32 GB RAM, 1 x 150 NVMe SSD Storage, 10 Gigabit Bandwidth	Per Hour	$0.65
132-40	Amazon Web Services	r5ad.2xlarge	na	na	Memory optimized, Windows, 8 vCPU,64 GB RAM, 1 x 300 NVMe SSD Storage, 10 Gigabit Bandwidth	Per Hour	$1.31
132-40	Amazon Web Services	r5ad.4xlarge	na	na	Memory optimized, Windows, 16 vCPU,128 GB RAM, 2 x 300 NVMe SSD Storage, 10 Gigabit Bandwidth	Per Hour	$2.62
132-40	Amazon Web Services	r5ad.12xlarge	na	na	Memory optimized, Windows, 48 vCPU,384 GB RAM, 2 x 900 NVMe SSD Storage, 10 Gigabit Bandwidth	Per Hour	$7.85

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
132-40	Amazon Web Services	r5ad.24xlarge	na	na	Memory optimized, Windows, 96 vCPU,768 GB RAM, 4 x 900 NVMe SSD Storage, 20 Gigabit Bandwidth	Per Hour	$15.69
132-40	Amazon Web Services	r5d.large	na	na	Memory optimized, Windows, 2 vCPU,16 GB RAM, 1 x 75 NVMe SSD Storage, 10 Gigabit Bandwidth	Per Hour	$0.35
132-40	Amazon Web Services	r5d.xlarge	na	na	Memory optimized, Windows, 4 vCPU,32 GB RAM, 1 x 150 NVMe SSD Storage, 10 Gigabit Bandwidth	Per Hour	$0.69
132-40	Amazon Web Services	r5d.2xlarge	na	na	Memory optimized, Windows, 8 vCPU,64 GB RAM, 1 x 300 NVMe SSD Storage, 10 Gigabit Bandwidth	Per Hour	$1.38
132-40	Amazon Web Services	r5d.4xlarge	na	na	Memory optimized, Windows, 16 vCPU,128 GB RAM, 2 x 300 NVMe SSD Storage, 10 Gigabit Bandwidth	Per Hour	$2.77

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
132-40	Amazon Web Services	r5d.8xlarge	na	na	Memory optimized, Windows, 32 vCPU,256 GB RAM, 2 x 600 NVMe SSD Storage, 10 Gigabit Bandwidth	Per Hour	$5.54
132-40	Amazon Web Services	r5d.12xlarge	na	na	Memory optimized, Windows, 48 vCPU,384 GB RAM, 2 x 900 NVMe SSD Storage, 10 Gigabit Bandwidth	Per Hour	$8.30
132-40	Amazon Web Services	r5d.16xlarge	na	na	Memory optimized, Windows, 64 vCPU,512 GB RAM, 4 x 600 NVMe SSD Storage, 20 Gigabit Bandwidth	Per Hour	$11.07
132-40	Amazon Web Services	r5d.24xlarge	na	na	Memory optimized, Windows, 96 vCPU,768 GB RAM, 4 x 900 NVMe SSD Storage, 25 Gigabit Bandwidth	Per Hour	$16.61
132-40	Amazon Web Services	r5d.metal	na	na	Memory optimized, Windows, 96 vCPU,768 GB RAM, 4 x 900 NVMe SSD Storage, 25 Gigabit Bandwidth	Per Hour	$16.61

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
132-40	Amazon Web Services	x1.16xlarge	na	na	Memory optimized, Windows, 64 vCPU,976 GB RAM, 1 x 1920 SSD Storage, High Bandwidth	Per Hour	$14.09
132-40	Amazon Web Services	x1.32xlarge	na	na	Memory optimized, Windows, 128 vCPU,1,952 GB RAM, 2 x 1920 SSD Storage, High Bandwidth	Per Hour	$28.18
132-40	Amazon Web Services	x1e.xlarge	na	na	Memory optimized, Windows, 4 vCPU,122 GB RAM, 1 x 120 SSD Storage, Up to 10 Gbps Bandwidth	Per Hour	$1.49
132-40	Amazon Web Services	x1e.2xlarge	na	na	Memory optimized, Windows, 8 vCPU,244 GB RAM, 1 x 240 SSD Storage, Up to 10 Gbps Bandwidth	Per Hour	$2.98
132-40	Amazon Web Services	x1e.4xlarge	na	na	Memory optimized, Windows, 16 vCPU,488 GB RAM, 1 x 480 SSD Storage, Up to 10 Gbps Bandwidth	Per Hour	$5.97
132-40	Amazon Web Services	x1e.8xlarge	na	na	Memory optimized, Windows, 32 vCPU,976 GB RAM, 1 x 960 SSD Storage, Up to 10 Gbps Bandwidth	Per Hour	$11.94

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
132-40	Amazon Web Services	x1e.16xlarge	na	na	Memory optimized, Windows, 64 vCPU,1,952 G B RAM, 1 x 1920 SSD Storage, 10 Gigabit Bandwidth	Per Hour	$23.88
132-40	Amazon Web Services	x1e.32xlarge	na	na	Memory optimized, Windows, 128 vCPU,3,904 GB RAM, 2 x 1,920 SSD Storage, 25 Gigabit Bandwidth	Per Hour	$47.75
132-40	Amazon Web Services	z1d.large	na	na	Memory optimized, Windows, 2 vCPU,16 GB RAM, 1 x 75 NVMe SSD Storage, Up to 10 Gbps Bandwidth	Per Hour	$0.41
132-40	Amazon Web Services	z1d.xlarge	na	na	Memory optimized, Windows, 4 vCPU,32 GB RAM, 1 x 150 NVMe SSD Storage, Up to 10 Gbps Bandwidth	Per Hour	$0.82
132-40	Amazon Web Services	z1d.2xlarge	na	na	Memory optimized, Windows, 8 vCPU,64 GB RAM, 1 x 300 NVMe SSD Storage, Up to 10 Gbps Bandwidth	Per Hour	$1.63
132-40	Amazon Web Services	z1d.3xlarge	na	na	Memory optimized, Windows,	Per Hour	$2.45

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
					12 vCPU,96 GB RAM, 1 x 450 NVMe SSD Storage, Up to 10 Gbps Bandwidth		
132-40	Amazon Web Services	z1d.6xlarge	na	na	Memory optimized, Windows, 24 vCPU,192 GB RAM, 1 x 900 NVMe SSD Storage, 10 Gigabit Bandwidth	Per Hour	$4.89
132-40	Amazon Web Services	z1d.12xlarge	na	na	Memory optimized, Windows, 48 vCPU,384 GB RAM, 2 x 900 NVMe SSD Storage, 25 Gigabit Bandwidth	Per Hour	$9.78
132-40	Amazon Web Services	z1d.metal	na	na	Memory optimized, Windows, 48 vCPU,384 GB RAM, 2 x 900 NVMe SSD Storage, 25 Gigabit Bandwidth	Per Hour	$9.78
132-40	Amazon Web Services	c5d.large	na	na	Compute Optimized, Linux, 2 vCPU, 4 GB RAM, 1 x 50 NVMe SSD Storage, Up to 10 Gbps	Per Hour	$0.14
132-40	Amazon Web Services	c5d.xlarge	na	na	Compute Optimized, Linux, 4 vCPU, 8 GB RAM, 1 x 100 NVMe SSD Storage, Up to 10 Gbps	Per Hour	$0.28

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
132-40	Amazon Web Services	c5d.2xlarge	na	na	Compute Optimized, Linux, 8 vCPU, 16 GB RAM, 1 x 200 NVMe SSD Storage, Up to 10 Gbps	Per Hour	$0.56
132-40	Amazon Web Services	c5d.4xlarge	na	na	Compute Optimized, Linux, 16 vCPU, 32 GB RAM, 1 x 400 NVMe SSD Storage, Up to 10 Gbps	Per Hour	$1.13
132-40	Amazon Web Services	c5d.9xlarge	na	na	Compute Optimized, Linux, 36 vCPU, 72 GB RAM, 1 x 900 NVMe SSD Storage, 10 Gigabit	Per Hour	$2.53
132-40	Amazon Web Services	c5d.18xlarge	na	na	Compute Optimized, Linux, 72 vCPU, 144 GB RAM, 2 x 900 NVMe SSD Storage, 25 Gigabit	Per Hour	$5.07
132-40	Amazon Web Services	d2.xlarge	na	na	Storage Optimized, Linux, 4 vCPU, 30.5 GB RAM, 3 x 2000 HDD Storage, Moderate	Per Hour	$1.01
132-40	Amazon Web Services	d2.2xlarge	na	na	Storage Optimized, Linux, 8 vCPU, 61 GB RAM, 6 x 2000 HDD Storage, High	Per Hour	$2.02
132-40	Amazon Web Services	d2.4xlarge	na	na	Storage Optimized, Linux, 16 vCPU, 122 GB RAM, 12 x 2000 HDD Storage, High	Per Hour	$4.05

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
132-40	Amazon Web Services	d2.8xlarge	na	na	Storage Optimized, Linux, 36 vCPU, 244 GB RAM, 24 x 2000 HDD Storage, 10 Gigabit	Per Hour	$8.09
132-40	Amazon Web Services	g4dn.xlarge	na	na	Accelerated Computing, Linux, 4 vCPU, 16 GB RAM, 125 GB NVMe SSD Storage, Up to 25 Gbps	Per Hour	$0.77
132-40	Amazon Web Services	g4dn.2xlarge	na	na	Accelerated Computing, Linux, 8 vCPU, 32 GB RAM, 225 GB NVMe SSD Storage, Up to 25 Gbps	Per Hour	$1.10
132-40	Amazon Web Services	g4dn.4xlarge	na	na	Accelerated Computing, Linux, 16 vCPU, 64 GB RAM, 225 GB NVMe SSD Storage, Up to 25 Gbps	Per Hour	$1.76
132-40	Amazon Web Services	g4dn.8xlarge	na	na	Accelerated Computing, Linux, 32 vCPU, 128 GB RAM, 900 GB NVMe SSD Storage, 50 Gigabit	Per Hour	$3.19
132-40	Amazon Web Services	g4dn.12xlarge	na	na	Accelerated Computing, Linux, 48 vCPU, 192 GB RAM, 900 GB NVMe SSD Storage, 50 Gigabit	Per Hour	$5.73
132-40	Amazon Web Services	g4dn.16xlarge	na	na	Accelerated Computing, Linux, 64 vCPU, 256 GB	Per Hour	$6.38

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
					RAM, 900 GB NVMe SSD Storage, 50 Gigabit		
132-40	Amazon Web Services	h1.2xlarge	na	na	Storage Optimized, Linux, 8 vCPU, 32 GB RAM, 1 x 2000 HDD Storage, Up to 10 Gbps	Per Hour	$0.69
132-40	Amazon Web Services	h1.4xlarge	na	na	Storage Optimized, Linux, 16 vCPU, 64 GB RAM, 2 x 2000 HDD Storage, Up to 10 Gbps	Per Hour	$1.37
132-40	Amazon Web Services	h1.8xlarge	na	na	Storage Optimized, Linux, 32 vCPU, 128 GB RAM, 4 x 2000 HDD Storage, 10 Gigabit	Per Hour	$2.74
132-40	Amazon Web Services	h1.16xlarge	na	na	Storage Optimized, Linux, 64 vCPU, 256 GB RAM, 8 x 2000 HDD Storage, 25 Gigabit	Per Hour	$5.49
132-40	Amazon Web Services	i3.large	na	na	Storage Optimized, Linux, 2 vCPU, 15.25 GB RAM, 1 x 475 NVMe SSD Storage, Up to 10 Gbps	Per Hour	$0.23
132-40	Amazon Web Services	i3.xlarge	na	na	Storage Optimized, Linux, 4 vCPU, 30.5 GB RAM, 1 x 950 NVMe SSD Storage, Up to 10 Gbps	Per Hour	$0.46
132-40	Amazon Web Services	i3.2xlarge	na	na	Storage Optimized, Linux, 8 vCPU, 61 GB RAM, 1 x 1900	Per Hour	$0.91

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
					NVMe SSD Storage, Up to 10 Gbps		
132-40	Amazon Web Services	i3.4xlarge	na	na	Storage Optimized, Linux, 16 vCPU, 122 GB RAM, 2 x 1900 NVMe SSD Storage, Up to 10 Gbps	Per Hour	$1.83
132-40	Amazon Web Services	i3.8xlarge	na	na	Storage Optimized, Linux, 32 vCPU, 244 GB RAM, 4 x 1900 NVMe SSD Storage, 10 Gigabit	Per Hour	$3.66
132-40	Amazon Web Services	i3.16xlarge	na	na	Storage Optimized, Linux, 64 vCPU, 488 GB RAM, 8 x 1900 NVMe SSD Storage, 20 Gigabit	Per Hour	$7.32
132-40	Amazon Web Services	i3.metal	na	na	Storage Optimized, Linux, 72 vCPU, 512 GB RAM, 8 x 1900 NVMe SSD Storage, 25 Gigabit	Per Hour	$7.32
132-40	Amazon Web Services	i3en.large	na	na	Storage Optimized, Linux, 2 vCPU, 16 GB RAM, 1 x 1250 NVMe SSD Storage, Up to 25 Gbps	Per Hour	$0.33
132-40	Amazon Web Services	i3en.xlarge	na	na	Storage Optimized, Linux, 4 vCPU, 32 GB RAM, 1 x 2500 NVMe SSD Storage, Up to 25 Gbps	Per Hour	$0.66

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
132-40	Amazon Web Services	i3en.2xlarge	na	na	Storage Optimized, Linux, 8 vCPU, 64 GB RAM, 2 x 2500 NVMe SSD Storage, Up to 25 Gbps	Per Hour	$1.33
132-40	Amazon Web Services	i3en.3xlarge	na	na	Storage Optimized, Linux, 12 vCPU, 96 GB RAM, 1 x 7500 NVMe SSD Storage, Up to 25 Gbps	Per Hour	$1.99
132-40	Amazon Web Services	i3en.6xlarge	na	na	Storage Optimized, Linux, 24 vCPU, 192 GB RAM, 2 x 7500 NVMe SSD Storage, 25 Gigabit	Per Hour	$3.98
132-40	Amazon Web Services	i3en.12xlarge	na	na	Storage Optimized, Linux, 48 vCPU, 384 GB RAM, 4 x 7500 NVMe SSD Storage, 50 Gigabit	Per Hour	$7.95
132-40	Amazon Web Services	i3en.24xlarge	na	na	Storage Optimized, Linux, 96 vCPU, 768 GB RAM, 8 x 7500 NVMe SSD Storage, 100 Gigabit	Per Hour	$15.90
132-40	Amazon Web Services	i3en.metal	na	na	Storage Optimized, Linux, 96 vCPU, 768 GB RAM, 8 x 7500 NVMe SSD Storage, 100 Gigabit	Per Hour	$15.90
132-40	Amazon Web Services	m5ad.large	na	na	Compute Optimized, Linux, 2 vCPU, 8 GB RAM, 1 x 75 NVMe	Per Hour	$0.15

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
					SSD Storage, Up to 10 Gbps		
132-40	Amazon Web Services	m5ad.xlarge	na	na	Compute Optimized, Linux, 4 vCPU, 16 GB RAM, 1 x 150 NVMe SSD Storage, Up to 10 Gbps	Per Hour	$0.30
132-40	Amazon Web Services	m5ad.2xlarge	na	na	Compute Optimized, Linux, 8 vCPU, 32 GB RAM, 1 x 300 NVMe SSD Storage, Up to 10 Gbps	Per Hour	$0.60
132-40	Amazon Web Services	m5ad.4xlarge	na	na	Compute Optimized, Linux, 16 vCPU, 64 GB RAM, 2 x 300 NVMe SSD Storage, Up to 10 Gbps	Per Hour	$1.21
132-40	Amazon Web Services	m5ad.12xlarge	na	na	Compute Optimized, Linux, 48 vCPU, 192 GB RAM, 2 x 900 NVMe SSD Storage, 10 Gigabit	Per Hour	$3.62
132-40	Amazon Web Services	m5ad.24xlarge	na	na	Compute Optimized, Linux, 96 vCPU, 384 GB RAM, 4 x 900 NVMe SSD Storage, 20 Gigabit	Per Hour	$7.25
132-40	Amazon Web Services	m5d.large	na	na	Compute Optimized, Linux, 2 vCPU, 8 GB RAM, 1 x 75 NVMe SSD Storage, Up to 10 Gbps	Per Hour	$0.17
132-40	Amazon Web Services	m5d.xlarge	na	na	Compute Optimized, Linux,	Per Hour	$0.33

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
					4 vCPU, 16 GB RAM, 1 x 150 NVMe SSD Storage, Up to 10 Gbps		
132-40	Amazon Web Services	m5d.2xlarge	na	na	Compute Optimized, Linux, 8 vCPU, 32 GB RAM, 1 x 300 NVMe SSD Storage, Up to 10 Gbps	Per Hour	$0.66
132-40	Amazon Web Services	m5d.4xlarge	na	na	Compute Optimized, Linux, 16 vCPU, 64 GB RAM, 2 x 300 NVMe SSD Storage, Up to 10 Gbps	Per Hour	$1.33
132-40	Amazon Web Services	m5d.8xlarge	na	na	Compute Optimized, Linux, 32 vCPU, 128 GB RAM, 2 x 600 NVMe SSD Storage, 10 Gigabit	Per Hour	$2.65
132-40	Amazon Web Services	m5d.12xlarge	na	na	Compute Optimized, Linux, 48 vCPU, 192 GB RAM, 2 x 900 NVMe SSD Storage, 10 Gigabit	Per Hour	$3.98
132-40	Amazon Web Services	m5d.16xlarge	na	na	Compute Optimized, Linux, 64 vCPU, 256 GB RAM, 4 x 600 NVMe SSD Storage, 20 Gigabit	Per Hour	$5.30
132-40	Amazon Web Services	m5d.24xlarge	na	na	Compute Optimized, Linux, 96 vCPU, 384 GB RAM, 4 x 900 NVMe SSD Storage, 25 Gigabit	Per Hour	$7.95

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
132-40	Amazon Web Services	m5d.metal	na	na	Compute Optimized, Linux, 96 vCPU, 384 GB RAM, 4 x 900 NVMe SSD Storage, 25 Gigabit	Per Hour	$7.95
132-40	Amazon Web Services	p3dn.24xlarge	na	na	Accelerated Computing, Linux, 96 vCPU, 768 GB RAM, 2 x 900 NVMe SSD Storage, 100 Gigabit	Per Hour	$45.75
132-40	Amazon Web Services	r5ad.large	na	na	Memory Optimized, Linux, 2 vCPU, 16 GB RAM, 1 x 75 NVMe SSD Storage, 10 Gigabit	Per Hour	$0.19
132-40	Amazon Web Services	r5ad.xlarge	na	na	Memory Optimized, Linux, 4 vCPU, 32 GB RAM, 1 x 150 NVMe SSD Storage, 10 Gigabit	Per Hour	$0.38
132-40	Amazon Web Services	r5ad.2xlarge	na	na	Memory Optimized, Linux, 8 vCPU, 64 GB RAM, 1 x 300 NVMe SSD Storage, 10 Gigabit	Per Hour	$0.77
132-40	Amazon Web Services	r5ad.4xlarge	na	na	Memory Optimized, Linux, 16 vCPU, 128 GB RAM, 2 x 300 NVMe SSD Storage, 10 Gigabit	Per Hour	$1.54
132-40	Amazon Web Services	r5ad.12xlarge	na	na	Memory Optimized, Linux, 48 vCPU, 384 GB RAM, 2 x 900 NVMe	Per Hour	$4.61

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
					SSD Storage, 10 Gigabit		
132-40	Amazon Web Services	r5ad.24xlarge	na	na	Memory Optimized, Linux, 96 vCPU, 768 GB RAM, 4 x 900 NVMe SSD Storage, 20 Gigabit	Per Hour	$9.22
132-40	Amazon Web Services	r5d.large	na	na	Memory Optimized, Linux, 2 vCPU, 16 GB RAM, 1 x 75 NVMe SSD Storage, 10 Gigabit	Per Hour	$0.21
132-40	Amazon Web Services	r5d.xlarge	na	na	Memory Optimized, Linux, 4 vCPU, 32 GB RAM, 1 x 150 NVMe SSD Storage, 10 Gigabit	Per Hour	$0.42
132-40	Amazon Web Services	r5d.2xlarge	na	na	Memory Optimized, Linux, 8 vCPU, 64 GB RAM, 1 x 300 NVMe SSD Storage, 10 Gigabit	Per Hour	$0.84
132-40	Amazon Web Services	r5d.4xlarge	na	na	Memory Optimized, Linux, 16 vCPU, 128 GB RAM, 2 x 300 NVMe SSD Storage, 10 Gigabit	Per Hour	$1.69
132-40	Amazon Web Services	r5d.8xlarge	na	na	Memory Optimized, Linux, 32 vCPU, 256 GB RAM, 2 x 600 NVMe SSD Storage, 10 Gigabit	Per Hour	$3.38
132-40	Amazon Web Services	r5d.12xlarge	na	na	Memory Optimized, Linux,	Per Hour	$5.07

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
					48 vCPU, 384 GB RAM, 2 x 900 NVMe SSD Storage, 10 Gigabit		
132-40	Amazon Web Services	r5d.16xlarge	na	na	Memory Optimized, Linux, 64 vCPU, 512 GB RAM, 4 x 600 NVMe SSD Storage, 20 Gigabit	Per Hour	$6.75
132-40	Amazon Web Services	r5d.24xlarge	na	na	Memory Optimized, Linux, 96 vCPU, 768 GB RAM, 4 x 900 NVMe SSD Storage, 25 Gigabit	Per Hour	$10.13
132-40	Amazon Web Services	r5d.metal	na	na	Memory Optimized, Linux, 96 vCPU, 768 GB RAM, 4 x 900 NVMe SSD Storage, 25 Gigabit	Per Hour	$10.13
132-40	Amazon Web Services	x1.16xlarge	na	na	Memory Optimized, Linux, 64 vCPU, 976 GB RAM, 1 x 1920 SSD Storage, High	Per Hour	$9.78
132-40	Amazon Web Services	x1.32xlarge	na	na	Memory Optimized, Linux, 128 vCPU, 1,952 GB RAM, 2 x 1920 SSD Storage, High	Per Hour	$19.55
132-40	Amazon Web Services	x1e.xlarge	na	na	Memory Optimized, Linux, 4 vCPU, 122 GB RAM, 1 x 120 SSD Storage, Up to 10 Gbps	Per Hour	$1.22

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
132-40	Amazon Web Services	x1e.2xlarge	na	na	Memory Optimized, Linux, 8 vCPU, 244 GB RAM, 1 x 240 SSD Storage, Up to 10 Gbps	Per Hour	$2.45
132-40	Amazon Web Services	x1e.4xlarge	na	na	Memory Optimized, Linux, 16 vCPU, 488 GB RAM, 1 x 480 SSD Storage, Up to 10 Gbps	Per Hour	$4.89
132-40	Amazon Web Services	x1e.8xlarge	na	na	Memory Optimized, Linux, 32 vCPU, 976 GB RAM, 1 x 960 SSD Storage, Up to 10 Gbps	Per Hour	$9.78
132-40	Amazon Web Services	x1e.16xlarge	na	na	Memory Optimized, Linux, 64 vCPU, 1,952 GB RAM, 1 x 1920 SSD Storage, 10 Gigabit	Per Hour	$19.56
132-40	Amazon Web Services	x1e.32xlarge	na	na	Memory Optimized, Linux, 128 vCPU, 3,904 GB RAM, 2 x 1,920 SSD Storage, 25 Gigabit	Per Hour	$39.12
132-40	Amazon Web Services	z1d.large	na	na	Memory Optimized, Linux, 2 vCPU, 16 GB RAM, 1 x 75 NVMe SSD Storage, Up to 10 Gbps	Per Hour	$0.27
132-40	Amazon Web Services	z1d.xlarge	na	na	Memory Optimized, Linux, 4 vCPU, 32 GB RAM, 1 x 150 NVMe SSD Storage, Up to 10 Gbps	Per Hour	$0.55

SIN	Manufacturer Name	Manufacturer Part Number	Dealer Part Number	Product Name	Product Description	UOI	GSA Price
132-40	Amazon Web Services	z1d.2xlarge	na	na	Memory Optimized, Linux, 8 vCPU, 64 GB RAM, 1 x 300 NVMe SSD Storage, Up to 10 Gbps	Per Hour	$1.09
132-40	Amazon Web Services	z1d.3xlarge	na	na	Memory Optimized, Linux, 12 vCPU, 96 GB RAM, 1 x 450 NVMe SSD Storage, Up to 10 Gbps	Per Hour	$1.64
132-40	Amazon Web Services	z1d.6xlarge	na	na	Memory Optimized, Linux, 24 vCPU, 192 GB RAM, 1 x 900 NVMe SSD Storage, 10 Gigabit	Per Hour	$3.27
132-40	Amazon Web Services	z1d.12xlarge	na	na	Memory Optimized, Linux, 48 vCPU, 384 GB RAM, 2 x 900 NVMe SSD Storage, 25 Gigabit	Per Hour	$6.54
132-40	Amazon Web Services	z1d.metal	na	na	Memory Optimized, Linux, 48 vCPU, 384 GB RAM, 2 x 900 NVMe SSD Storage, 25 Gigabit	Per Hour	$6.54

TERMS AND CONDITIONS APPLICABLE TO INFORMATION TECHNOLOGY (IT) PROFESSIONAL SERVICES (SPECIAL ITEM NUMBER 132-51)

****The phrase, "Information Technology (IT) Professional Services/Identity Access Management (IAM) Professional Services" in the following paragraphs may need to be revised in order to be consistent with the Offeror's proposal; e.g., if only IT Professional Services are offered, all references to IAM Services should be deleted.****

******NOTE: All non-professional labor categories must be incidental to, and used solely to support professional services, and cannot be purchased separately. Further, non-professional labor categories shall be offered under SIN 132 100 only.**

1. SCOPE

a. The prices, terms and conditions stated under Special Item Number 132-51 Information Technology Professional Services apply exclusively to IT Professional Services within the scope of this Information Technology Schedule.

b. The Contractor shall provide services at the Contractor's facility and/or at the ordering activity location, as agreed to by the Contractor and the ordering activity.

2. PERFORMANCE INCENTIVES I-FSS-60 Performance Incentives (April 2000)

a. Performance incentives may be agreed upon between the Contractor and the ordering activity on individual fixed price orders or Blanket Purchase Agreements under this contract.

b. The ordering activity must establish a maximum performance incentive price for these services and/or total solutions on individual orders or Blanket Purchase Agreements.

c. Incentives should be designed to relate results achieved by the contractor to specified targets. To the maximum extent practicable, ordering activities shall consider establishing incentives where performance is critical to the ordering activity's mission and incentives are likely to motivate the contractor. Incentives shall be based on objectively measurable tasks.

3. ORDER

a. Agencies may use written orders, EDI orders, blanket purchase agreements, individual purchase orders, or task orders for ordering services under this contract. Blanket Purchase Agreements shall not extend beyond the end of the contract period; all services and delivery shall be made and the contract terms and conditions shall continue in effect until the completion of the order. Orders for tasks which extend beyond the fiscal year for which funds are available shall include FAR 52.232-19 (Deviation – May 2003) Availability of Funds for the Next Fiscal Year. The purchase order shall specify the availability of funds and the period for which funds are available.

b. All task orders are subject to the terms and conditions of the contract. In the event of conflict between a task order and the contract, the contract will take precedence.

4. PERFORMANCE OF SERVICES

a. The Contractor shall commence performance of services on the date agreed to by the Contractor and the ordering activity.

b. The Contractor agrees to render services only during normal working hours, unless otherwise agreed to by the Contractor and the ordering activity.

c. The ordering activity should include the criteria for satisfactory completion for each task in the Statement of Work or Delivery Order. Services shall be completed in a good and workmanlike manner.

d. Any Contractor travel required in the performance of IT Services must comply with the Federal Travel Regulation or Joint Travel Regulations, as applicable, in effect on the date(s) the travel is performed. Established Federal Government per diem rates will apply to all Contractor travel. Contractors cannot use GSA city pair contracts.

5. STOP-WORK ORDER (FAR 52.242-15) (AUG 1989)

a. The Contracting Officer may, at any time, by written order to the Contractor, require the Contractor to stop all, or any part, of the work called for by this contract for a period of 90 days after the order is delivered to the Contractor, and for any further period to which the parties may agree. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Within a period of 90 days after a stop-work is delivered to the Contractor, or within any extension of that period to which the parties shall have agreed, the Contracting Officer shall either-

(1) Cancel the stop-work order; or

(2) Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government, clause of this contract.

b. If a stop-work order issued under this clause is canceled or the period of the order or any extension thereof expires, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule or contract price, or both, and the contract shall be modified, in writing, accordingly, if-

(1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and

(2) The Contractor asserts its right to the adjustment within 30 days after the end of the period of work stoppage; provided, that, if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon the claim submitted at any time before final payment under this contract.

c. If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

d. If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

6. INSPECTION OF SERVICES

In accordance with 552.212-4 CONTRACT TERMS AND CONDITIONS–COMMERCIAL ITEMS (JAN 2017) (DEVIATION – FEB 2007)(DEVIATION - FEB 2018) for Firm-Fixed Price orders; or GSAR 552.212-4 CONTRACT TERMS AND CONDITIONS-COMMERCIAL ITEMS (JAN 2017) (DEVIATION - FEB 2018) (ALTERNATE I - JAN 2017) (DEVIATION -

FEB 2007) for Time-and-Materials and Labor-Hour Contracts orders placed under this contract.

7. RESPONSIBILITIES OF THE CONTRACTOR

The Contractor shall comply with all laws, ordinances, and regulations (Federal, State, City, or otherwise) covering work of this character. If the end product of a task order is software, then FAR 52.227-14 (Dec 2007) Rights in Data – General, may apply.

8. RESPONSIBILITIES OF THE ORDERING ACTIVITY

Subject to security regulations, the ordering activity shall permit Contractor access to all facilities necessary to perform the requisite IT/IAM Professional Services.

9. INDEPENDENT CONTRACTOR

All IT Professional Services performed by the Contractor under the terms of this contract shall be as an independent Contractor, and not as an agent or employee of the ordering activity.

10. ORGANIZATIONAL CONFLICTS OF INTEREST

a. Definitions.

"Contractor" means the person, firm, unincorporated association, joint venture, partnership, or corporation that is a party to this contract.

"Contractor and its affiliates" and "Contractor or its affiliates" refers to the Contractor, its chief executives, directors, officers, subsidiaries, affiliates, subcontractors at any tier, and consultants and any joint venture involving the Contractor, any entity into or with which the Contractor subsequently merges or affiliates, or any other successor or assignee of the Contractor.

An "Organizational conflict of interest" exists when the nature of the work to be performed under a proposed ordering activity contract, without some restriction on ordering activities by the Contractor and its affiliates, may either (i) result in an unfair competitive advantage to the Contractor or its affiliates or (ii) impair the Contractor's or its affiliates' objectivity in performing contract work.

b. To avoid an organizational or financial conflict of interest and to avoid prejudicing the best interests of the ordering activity, ordering activities may place restrictions on the Contractors, its affiliates, chief executives, directors, subsidiaries and subcontractors at any tier when placing orders against schedule contracts. Such restrictions shall be consistent with FAR 9.505 and shall be designed to avoid, neutralize, or mitigate organizational conflicts of interest that might otherwise exist in situations related to individual orders placed against the schedule contract. Examples of situations, which may require restrictions, are provided at FAR 9.508.

11. INVOICES

The Contractor, upon completion of the work ordered, shall submit invoices for IT Professional services. Progress payments may be authorized by the ordering activity on individual orders if appropriate. Progress payments shall be based upon completion of defined milestones or interim products. Invoices shall be submitted monthly for recurring services performed during the preceding month.

12. PAYMENTS

For firm-fixed price orders the ordering activity shall pay the Contractor, upon submission of proper invoices or vouchers, the prices stipulated in this contract for service rendered and accepted.

Progress payments shall be made only when authorized by the order. For time-and- materials orders, the Payments under Time-and-Materials and Labor-Hour Contracts at FAR 52.212-4 (MAR 2009) (ALTERNATE I – OCT 2008) (DEVIATION I – FEB 2007) applies to time-and-materials orders placed under this contract. For labor-hour orders, the Payment under Time-and-Materials and Labor-Hour Contracts at FAR 52.212-4 (MAR 2009) (ALTERNATE I – OCT 2008) (DEVIATION I – FEB 2007) applies to labor-hour orders placed under this contract. 52.216-31(Feb 2007) Time-and Materials/Labor-Hour Proposal Requirements— Commercial Item Acquisition. As prescribed in 16.601(e)(3), insert the following provision:

a. The Government contemplates award of a Time-and-Materials or Labor-Hour type of contract resulting from this solicitation.

b. The offeror must specify fixed hourly rates in its offer that include wages, overhead, general and administrative expenses, and profit. The offeror must specify whether the fixed hourly rate for each labor category applies to labor performed by—

(1) The offeror;

(2) Subcontractors; and/or

(3) Divisions, subsidiaries, or affiliates of the offeror under a common control.

13. RESUMES

Resumes shall be provided to the GSA Contracting Officer or the user ordering activity upon request.

14. INCIDENTAL SUPPORT COSTS

Incidental support costs are available outside the scope of this contract. The costs will be negotiated separately with the ordering activity in accordance with the guidelines set forth in the FAR.

15. APPROVAL OF SUBCONTRACTS

The ordering activity may require that the Contractor receive, from the ordering activity's Contracting Officer, written consent before placing any subcontract for furnishing any of the work called for in a task order.

16. DESCRIPTION OF IT/IAM PROFESSIONAL SERVICES AND PRICING

a. The Contractor shall provide a description of each type of IT Service offered under Special Item Numbers 132-51 IT Professional Services should be presented in the same manner as the Contractor sells to its commercial and other ordering activity customers. If the Contractor is proposing hourly rates, a description of all corresponding commercial job titles (labor categories) for those individuals who will perform the service should be provided.

b. Pricing for all IT Professional Services shall be in accordance with the Contractor's customary commercial practices; e.g., hourly rates, monthly rates, term rates, and/or fixed prices, minimum general experience and minimum education.

c. The following is an example of the manner in which the description of a commercial job title should be presented:

EXAMPLE: Commercial Job Title: System Engineer

Minimum/General Experience: Three (3) years of technical experience which applies to systems analysis and design techniques for complex computer systems. Requires competence in all phases of systems analysis techniques, concepts and methods; also requires knowledge of available hardware, system software, input/output devices, structure and management practices.

Functional Responsibility: Guides users in formulating requirements, advises alternative approaches, conducts feasibility studies.

SIN: 132-40: Cloud Computing Labor Descriptions

Program Manager:
Minimum Experience: 20 years
Minimum Education: Bachelors
Responsible to formulate, organize and monitor relatively significant program or a group of inter-connected information technology related projects. Must be able to decide on the suitable strategies to adopt in order to meet program objectives of the IT projects. Would be responsible for coordinating cross-project activities. They would be leading and evaluating project managers and other staff. The program manager shall be answerable for controlling the program deadlines, budgets and activities. They must plan ahead to manage change and risk management and must also develop high-level risk mitigation strategies.

Project Manager:
Minimum Experience: 15 years
Minimum Education: Bachelors
Responsible for managing all the aspects of project management for information technology related projects, since the discovery phase of the project and carrying it through the design, development, quality testing, security testing and deployment on the cloud infrastructure. Has an in-depth understanding of the relevant technologies and the requirements of the project. Identifies the core areas of focus to solve the customer's business pains and helps the team in designing the most suitable solution that affectively addresses all the customer needs. Also acts as the main point of contact for the high-level communication with the client and passes the relevant instructions to the development team. Develops detailed project plans, effort estimates, schedules, resource allocation plans and risk and mitigation plans. The Project Manager must get all these plans approved by the client before the commencement of the project. Project Manager will be answerable to the client in case of any changes in the plan. It is their job to ensure all the deliverables are produced before the deadline and no deviation from original project plans takes place. In case such deviations are inevitable, the Project Manager shall develop mitigation strategies and communicate all these changes to the client with justifications for the change, if necessary.

Project Engineer:
Minimum Experience: 5 years
Minimum Education: Bachelors
These individuals have an engineering background with a firm grasp on development technologies, programming languages, deployment infrastructures, and technology integration processes. They must have both the engineering and management skills to manage information technology or software development related projects. Project Engineers are responsible to create a flawless communication within technical and non-technical teams in order to evaluate the prospective projects, agree on timelines, draw up agreements with clients and research and negotiate with third party contractors in order to bring project into fruition. The project engineer’s ultimate responsibility is to bring a budgeted and successful project to life while satisfying all parties involved.

They should be able to create and administer appropriate software testing protocols to monitor project performance and inform all supervisors and subcontractors promptly of any project schedule changes. They must work closely with all stakeholders to ensure requirements are met. They are supposed to verify that the technical specifications of the information technology project are fulfilled. They may also be required to maintain budgetary, scheduling, and project database oversight, and report regularly to project manager to keep him/her constantly informed of job progress, plans and problems that could significantly affect costs or schedules.

Staff Engineer:
Minimum Experience: 3 years
Minimum Education: Bachelors
A Staff Engineer has a firm grasp on development technologies, programming languages, deployment infrastructures, and technology integration processes. They direct the adoption of technical practices to achieve sustainable and efficient technical results for projects related to information technology or software development. Staff Engineer also evaluates designing and development plans of new product designs and develops new process capability to meet the organization's requirements. Other responsibilities include establishing maintenance strategies and systems and integrating quality principles and methodology to enhance engineering performance of the developed information technology solutions. Working in consultation with other department heads, the Engineer takes on the role of an advisor to recommend technical solutions and influence technical decisions. They should have good leadership qualities to spearhead change in management.

System Architect:
Minimum Experience: 10 years
Minimum Education: Bachelors
Responsible for designing and implementing short and long-term strategic goals for managing and maintaining software systems. They make sure that all the planned and in-place system architectures are aligned with the specific firm's goals. They provide their expertise and architectural assistance to other IT Personnel including software teams, requirements analysts and engineers. They conduct research on new technologies in the field of systems development and create and develop plans for investing in such systems that will increase cost effectiveness and flexibility. System Architects design, create and monitor the implementation of end-to-end integrated systems. They also review new and existing system designs and make recommendations for improving or altering the systems. The end goal is to provide the most reliable and robust system performance within the approved budget.

Solution Architect:
Minimum Experience: 8 years
Minimum Education: Bachelors
Solution Architect is responsible for developing a deep understanding of the customer's requirements and design a holistic solution that is bound to relieve the customer of their business pains. Solution Architect belongs to a technical background and has an in-depth knowledge of software development technologies. They get the requirements by the Project Manager or the Requirements Analyst, understand them and develop high-level algorithms for the software structure. They recommend the best course of action to fulfill those needs and must be flexible enough to adapt to the client's requirements. The solution architect will prepare end-to-end software workflows, work with the database architect to prepare database designs, and develop the course of action and algorithms for integrating the systems with any existing software or third party systems.

Data Scientist (Transportation):
Minimum Experience: 10 years

Minimum Education: Bachelors
Transportation Data Scientists utilize their analytical, statistical, and programming skills to collect, analyze, and interpret large transportation data sets, for use in IT related projects. They then use this information to develop data-driven solutions to transportation decision-making challenges. Transportation Data Scientists commonly have a multi-faceted background in a combination of engineering and computational fields. Their engineering background is in civil engineering, transportation engineering, or another related field. Their computational background is in statistics, math, computational science, or another related field. Transportation Data Scientists have a wide range of technical competencies including statistics, databases, big data, data analysis, data quality management, machine learning, evolutionary computation, data visualization and reporting technologies.

Software Development Manager:

Minimum Experience: 10 years
Minimum Education: Bachelors
The software development managers are the highly experienced software developers, responsible for all aspects of programming and software development for multiple projects running in parallel. They are leading the teams of software engineers and computer scientists who are responsible for programming of the specific parts of the software systems. They have to decide the allocation of resources for the specific projects and programming tasks and distribute the workload to gain maximum output from the available resources. Being computer programmers themselves, the software development managers have to review and verify the quality of the code and ensure all the code management and documentation protocols are being followed.

Quality Assurance Manager:

Minimum Experience: 10 years
Minimum Education: Bachelors
QA manager is responsible for managing the quality assurance for the entire scope of work of the given project. They are responsible for creating, reviewing and approving test plans for the software project and ensure the availability of resources at the time of requirement. The QA manager would ensure the optimum resource allocation to run QA testing on multiple modules of the project in parallel to minimize the testing time and speed up the overall process. They must ensure that all bugs pointed out by their team have been rectified before the project goes live. In case the development team is unable to fix the bugs, they must escalate the problem to the Project Manager so that they can devise a mitigation strategy. In addition, the QA manager is also responsible for conducting regular internal audits to ensure all the processes are being followed to meet the quality standards and strict documentation is taking place at each step. They may have to work with PMO and development team to find the deficiencies in the processes and suggest improvements.

Senior Software Developer/Senior Computer Programmer:

Minimum Experience: 8 years
Minimum Education: Bachelors
These are the experienced programmers who work on mission critical parts of the software. They usually have to develop codes for complicated algorithms and test them locally before merging them with the software system. They can work in multiple roles related to software development, software quality testing as well as infrastructure management and integration. They usually have to work on both the front-end and back-end technologies. They often delegate the lesser complicated coding to the junior programmers and work themselves on the complex portions. These resources work under minimal supervision and are responsible for major components of the software system.

Software Developer/Computer Programmer:

Minimum Experience: 3 years
Minimum Education: Bachelors
These developers have intermediate experience who can manage to program the considerably complicated parts of the software. They are responsible for the rapid prototyping of the software patches and merging them with the holistic solution. They can work in multiple roles related to software development, software quality testing as well as infrastructure management and integration. They usually have to work on both the front-end and back-end technologies. They mostly work independently for the assigned responsibilities but might require occasional assistance from the senior developers or managers. They may develop technical documentation and user manuals for the product under development.

Junior Software Developer/Junior Computer Programmer:

Minimum Experience: 1 year

Minimum Education: Bachelors
Under supervision, these programmers can perform coding for new software components and perform other software development and integration activities. They can work in multiple roles related to software development, software quality testing as well as infrastructure management and integration. They usually have to work on both the front-end and back-end technologies. They can also perform technical support and routine maintenance tasks. Their team leads or managers will be supervising and reviewing their activities to ensure quality of work. Additionally, they may assist in the development of user manuals and work on the technical documentation of the project.

Senior Software Tester:

Minimum Experience: 8 years
Minimum Education: Bachelors
These are highly experienced resources who can work independently on specific projects and ensure that no compromise on software quality is taking place at the hands of the development team. They will develop testing automation procedures to maximize the speed of software testing. They often have to lead a group of junior testers and delegate testing responsibilities, while also reviewing their progress and ensuring that the deadline is not missed.

Software Tester:

Minimum Experience: 3 years
Minimum Education: Bachelors
These are the experienced resources who can work independently on specific projects and ensure that no compromise on software quality is taking place at the hands of the development team. They will develop testing automation procedures to maximize the speed of software testing. For some projects, they may have to lead a group of junior testers and delegate testing responsibilities, while also reviewing their progress and ensuring that the deadline is not missed.

Junior Software Tester:

Minimum Experience: 1 year
Minimum Education: Bachelors
These resources work under the direct supervision of their seniors or the manager in order to perform software testing and automation. These are responsible for developing use cases and test cases documents and assist their seniors in developing detailed testing plans and schedules. They may also be required to assist in compiling testing and bug fixing reports for the specific projects.

Senior Database Administrator:

Minimum Experience: 10 years
Minimum Education: Bachelors
A highly experienced professional having complete expertise in database design and management for applications with massive data requirements. Has good command in the use of DBMS and can independently lead a team of database engineers to carry out all the database design and management related tasks. Quite often, they have to work with the system architect/solution architect to get a good understanding of the customer requirements and design the most suitable solution. The senior database administrator are often managing a team of database engineers and delegating database related tasks to them, in case multiple projects are running in parallel. The senior database administrator must also be ultimately responsible for database errors faced in live websites and must proactively resolve critical issues themselves or by delegating to their subordinates.

Database Administrator:

Minimum Experience: 5 years
Minimum Education: Bachelors
A highly experienced professional having expertise in database design and management for applications with massive data requirements. Has good command in the use of DBMS and can work independently to carry out all the database design and management related tasks. Quite often, they must work with the system architect/solution architect to get a good understanding of the customer requirements and design the most suitable solution. The database administrator might be managing a team of database engineers and delegating database related tasks to them, in case multiple projects are running in parallel. The database administrator must also be ultimately responsible for database errors faced in live websites and must proactively resolve critical issues themselves or by delegating to their subordinates.

Junior Database Administrator:

Minimum Experience: 1 year
Minimum Education: Bachelors
An experienced professional having expertise in database design and management for applications with massive data requirements. Has good command in the use of DBMS and can work independently to carry out all the database design and management related tasks. Quite often, they must work with the system architect/solution architect to get a good understanding of the customer requirements and design the most suitable solution. The junior database administrator might be managing a team of database engineers and delegating database related tasks to them, for multiple projects running in parallel. The database administrator must also be ultimately responsible for database issues faced in live websites and must proactively resolve critical issues themselves or delegating to their subordinates.

Senior Database Engineer:

Minimum Experience: 8 years
Minimum Education: Bachelors
Responsible for designing databases and ERDs for applications with complex data needs. The senior database engineer mostly works independently but may have to work in supervision of a manager to execute the tasks at hand. Quite often, they must work with the system architect/solution architect to get a good understanding of the customer requirements and design or propose the most suitable solution. They are also responsible for the support, maintenance and troubleshooting of existing applications.

Database Engineer:

Minimum Experience: 3 years
Minimum Education: Bachelors

Responsible for designing databases and ERDs for applications with considerable data needs. The database engineer may work independently, or require supervision/assistance of a senior/manager to execute the tasks at hand. They are also responsible for the support, maintenance and troubleshooting of existing applications.

Junior Database Engineer:

Minimum Experience: 1 year
Minimum Education: Bachelors
Responsible for designing databases and ERDs for applications with relatively simple data needs. The junior database engineer may frequently require supervision/assistance of a senior/manager to execute the tasks at hand. They are also responsible to assist in the support, maintenance and troubleshooting of existing applications.

Technical Support Manager:

Minimum Experience: 8 years
Minimum Education: Bachelors
A highly experienced professional having the expertise and skill-set to manage a team of resources to provide on-going technical support for multiple software projects in parallel. The manager has to assign optimum resources to make sure the reported issues are fixed on priority and in minimum amount of time. They set the KPI's for their team and track the status of bug reporting and fixing. They are also responsible to document and present periodic reports about the performance of the support team by analyzing the data of the reported problems and the time taken to resolve them. They also plan and devise strategies to improve the response time of their team, by changing the resource allocation, or providing necessary training to the underperforming resources. In case of complicated problems arising, they may have to directly communicate with the client and development team unless all the issues have been resolved.

Technical Support Coordinator:

Minimum Experience: 3 years
Minimum Education: Bachelors
A moderately experienced technical support engineer who can manage the technical support for a complete IT project and carry out the important communication with the relevant stakeholders. They must have a firm grasp on development technologies, programming languages, deployment infrastructures, and technology integration processes. They may have to communicate with the client's point of contact and also coordinate with their own software development team until the problem is resolved effectively. In case the problem is more complicated and there is a chance of increase in system downtime, the coordinator will escalate the issue and inform all the relevant stakeholders. They also have to keep track of the progress at all stages and take actions for effective resolution of issues in the minimum time. The coordinator is also responsible for generating and compiling reports regarding the reported issues and their resolution to assess the team performance and take steps to further boost the performance if required.

Network Support Manager:

Minimum Experience: 8 years
Minimum Education: Bachelors
A highly experienced professional who is capable of managing a team of resources for maintaining and administering computer networks and related computing environments including systems software, applications software, hardware, and configurations. They plan, document, train the resources and supervise the disaster recovery operations and data backup procedures when required, in addition to protecting data, software, and hardware by coordinating, planning and implementing network security measures. They are able to manage troubleshooting, diagnosing and resolving hardware, software and

other network and system problems. In fact, the network manager has to ensure and plan ahead to make sure no connectivity or software performance issues arise in any of the projects. They continuously monitor network performance to determine if any adjustments or modifications need to be made. In addition, they are the subject matter experts regarding the cyber-security risk assessment and mitigation strategies. They are responsible for reinstating the system in its original running form in the minimum possible time in case of an incident.

Network Support Coordinator:

Minimum Experience: 3 years
Minimum Education: Bachelors
An experienced professional who is responsible for maintaining and administering computer networks and related computing environments including systems software, applications software, hardware, and configurations. They plan, document, and perform the disaster recovery operations and data backup procedures when required, in addition to protecting data, software, and hardware by coordinating, planning and implementing network security measures. Their responsibilities also include troubleshooting, diagnosing and resolving hardware, software and other network and system problems. They continuously monitor network performance to determine if any adjustments or modifications need to be made. They can work independently, but may require assistance from the supervisor/manager. In addition, they are involved in performing the cyber-security risk assessment and mitigation strategies. They are responsible for reinstating the system in its original running form in the minimum possible time in case of an incident.

UX/UI Designer:

Minimum Experience: 5 years
Minimum Education: Bachelors
Has the prime responsibility of creating detailed front-end design wireframes, mockups, templates and/or any additional design elements that may be required in the development of a software project. The UX/UI designer works with the solution architect/system architect to understand the requirements and comes up with the most suitable front-end designs that are both aesthetically pleasing and user friendly. The designer also has to keep researching the latest design trends in the market. The designer has to lay special emphasis on the user-point of view and create user-centric designs, coherent with the latest design trends. The UX/UI designer shall be responsible for creating the front-end designs of webpages, as well as complete theme designs for websites and portals.

Senior Graphics Artist:

Minimum Experience: 8 years
Minimum Education: Bachelors
Has the prime responsibility of creating detailed design wireframes, mockups, templates and/or any additional design elements that may be required in the development of a software project. The graphics designer has to work directly with the development team, understand the requirements and come up with the most suitable designs that are both aesthetically pleasing and user friendly. The designer also has to keep researching the latest design trends in the market. The designer has to lay special emphasis on the user-point of view and create user-centric designs, coherent with the latest design trends. Other than development related work, the graphics artist can also provide design services including, but not limited to, logo designing, brochures/fliers, product catalogues, social media banners, visiting cards, corporate branding portfolio, infographics etc. Additionally, they shall possess the skill sets of video editing, compilation and animations required for a project. These can include creating user tutorials for the software being developed, informational or promotional videos, or user testimonials for a software product. They may also be involved in designing 2D and 3D animations if required by the scope of the project.

Graphics Artist:

Minimum Experience: 5 years
Minimum Education: Bachelors
Has the prime responsibility of creating detailed design wireframes, mockups, templates and/or any additional design elements that may be required in the development of a software project. The graphics designer has to work directly with the development team, understand the requirements and come up with the most suitable designs that are both aesthetically pleasing and user friendly. The designer also has to keep researching the latest design trends in the market. The designer has to lay special emphasis on the user-point of view and create user-centric designs, coherent with the latest design trends. Other than development related work, the graphics artist can also provide design services including, but not limited to, logo designing, brochures/fliers, product catalogues, social media banners, visiting cards, corporate branding portfolio, infographics etc.

Technical Writer:

Minimum Experience: 1 year

Minimum Education: Bachelors
The technical writer has to assist the development team, the solutions or system architects, the project manager and sometimes even the business team in developing all the technical documentation for the project. They need to have a thorough understanding of the complete software development lifecycle stages, the development tools and technologies and the technical terminologies so they can document the details in the most accurate manner. They are also important in creating an information bridge between the technical and business teams while they compile their detailed documents for any project.